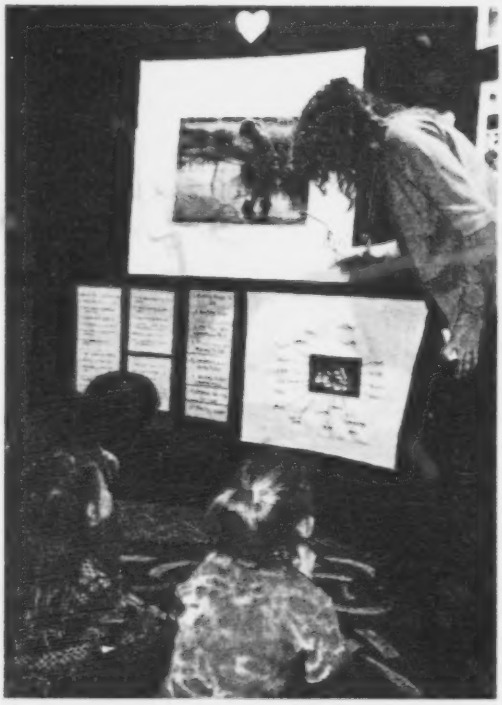
Improving Student Learning

Second-Year Implementation of the Alberta Initiative for School Improvement

Provincial Report for the 2001/2002 School Year

June 2003



College of Alberta School Superintendents

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A·S·B·A Alberta School Boards Association

ASBOA

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EXECUTIVE SUMMARY

The second provincial report of the Alberta Initiative for School Improvement (AISI) documents AISI activities and results obtained during the 2001/2002 school year and compares these to results obtained in the previous year.

Context

AISI is a program designed to foster continuous improvement in student learning by bringing together teachers, administrators, parents, educational partners and the community to build research-based improvement initiatives. The goal of AISI is to improve student learning and performance by supporting initiatives that address unique needs within school authorities.

The 58 public and separate school jurisdictions, 5 Francophone authorities and 10 charter schools developed and implemented 471 projects during 2001/2002. There were also 231 private school authorities (115 private schools and 116 ECS private operators) in Alberta managing 247 projects. A total of 718 projects were operational in the province during the second year of AISI.

AISI is targeted funding, which means funding is provided to school authorities in addition to basic instruction funding for specific local initiatives that are focused on improving student learning. All school authorities in Alberta (ECS to grade 12) are eligible to receive AISI funding. In project years one and two, $136 million was available for use in AISI projects, $68 million for each year of operation.

Measures

Every project plan included a set of performance measures used to evaluate success. These measures fell under two broad categories:

1. Student learning measures directly related to student achievement.
2. Qualitative and other measures not directly related to student achievement such as satisfaction and attitudes of students, parents or teachers.

Student learning measures included provincial achievement tests (PATs) and diploma examination results, locally developed test/assessment results, and results from other locally administered tests. The qualitative measures included satisfaction, attitudes, behavior, and other program implementation measures such as the number of workshops held and the number of technology outcomes integrated into the curriculum.

Da a Analysis

Four analyses were performed on the data to determine project success:

1. Results that met or exceeded their targets.
2. Results that improved over the baseline.
3. Magnitude of project effects analysis.
4. Meta-Analysis.

Results Highlighted

- Overall results showed that AISI continued to make positive impacts on student learning.
- Seventy-four percent of projects met their targets on the majority of measures in 2002.
- Nearly all projects (92%) reported improvements on the majority of their learning measures.
- Thirty-seven percent of projects had medium (0.4-0.7) and large (0.8+) effect sizes on student learning. Most successful education action research projects are expected to have an effect size of 0.4 or greater.
- Projects that appeared to make the greatest impact on students were those that targeted students with special needs or at risk students.
- Projects that focused on selected curricular areas, particularly science and early literacy, resulted in gains to student learning.
- Other project themes and learning variables that showed positive impacts on student learning were individualized or small group instruction, technology integration, early intervention, and high school completion.
- The projects that showed modest gains (small effect sizes of 0.2 to 0.3) targeted students who are gifted and talented, curricular areas such as fine arts and mathematics, or small class size variables.
- Schools with AISI projects in the same grade and subjects as Provincial Achievement Tests (PATs), showed slightly higher results at the acceptable standard level when compared to all schools in the province. The provincial results include the achievement scores of students who benefited from the AISI school projects. Although not statistically significant, these results indicate a probable positive impact of AISI on student achievement at the acceptable standard level in the past two years. At the standard of excellence level however, improvement over provincial results was not generally noted during the first and second years of AISI. This is not unexpected since fewer AISI projects were designed to improve the percentage of students meeting the standard of excellence.
- Features from the 155 projects showing medium and large effect sizes analyzed to identify effective practices are as follows:
    - The most common project focus areas were early literacy, language arts and technology.
    - The majority were multi-grade level projects.
    - The most common instructional strategies were one-on-one/small group, trained specialists, or technology integration.
    - Professional development, particularly school based in-service that targeted AISI project focus, was a key component of project design and implementation in most projects.
    - Project staff implemented strategies to involve parents to enhance student learning.

Conclusion

AISI has produced improvements in student learning in its two years of operation. Results show that AISI has been a successful collaboration among government, partner organizations, and Alberta students, teachers, administrators, trustees, parents and community in developing and implementing projects that address local needs and circumstances. AISI has already been successful in facilitating school improvement through targeted funding. Measurement of qualitative and quantitative gains to student learning and performance in order to determine whether this primary goal has been met remains a focus at local and provincial levels. Professional development, project design, implementation and evaluation are key components of AISI projects.

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INTRODUCTION

Destiny is not a matter of change, it is a matter of choice, it is not a thing to be waited for, it is a thing to be achieved.

William J. Bryan

This is the second provincial report of the Alberta Initiative for School Improvement (AISI). The report documents AISI activities and results obtained during the first two years of AISI implementation.

Context

AISI is a program designed to foster continuous improvement in student learning by bringing together teachers, administrators, parents, educational partners and the community to build research based improvement initiatives. In August, 1999, the Minister of Learning met with representatives from key partners' associations to set parameters and establish a new initiative that would serve as a model of collaborative planning and establish the goals, principles, key considerations and administrative requirements for AISI. The partnering associations are identified below:

- Alberta Home and School Councils' Association (AHSCA)
- Alberta Learning
- Alberta School Boards Association (ASBA)
- Alberta Teachers' Association (ATA)
- Association of Alberta School Business Officials (ASBOA)
- College of Alberta School Superintendents (CASS)
- Universities of Alberta, Calgary, Lethbridge and the Faculte Saint-Jean.

AISI is based on the belief that effective school improvement programs should address local needs and circumstances and be collaboratively planned, developed and implemented in a climate of trust, flexibility and common purpose. The six principles for AISI follow.

- Funding flows to school jurisdictions and charter schools based upon approved proposals.
- Project proposals may be multi-year (maximum of three years) but must have interim (at least annual) progress measurement targets. Continued funding depends upon evidence of success.
- Funding consisting of an equal amount per registered Full-time equivalent (FTE) student will be based on the previous year's September 30 enrolment.
- Jurisdiction proposals need to be linked to and become part of the current three-year planning and reporting process for purposes of school jurisdiction annual planning, reporting and accountability processes.
- Each project includes an appropriate balance of local and provincial performance measures and approved quantitative and qualitative measures.
- Project results are shared with Alberta school jurisdictions and others while Alberta Learning acts as the "clearinghouse' on behalf of all partners.

Further details about these principles can be found in the *Framework for the Alberta Initiative for School Improvement.*

AISI Building Blocks

AISI is an extension of Alberta's accountability framework. The goal of AISI is to improve student learning and performance by fostering initiatives that reflect the unique needs and circumstances within school authorities.

AISI is a unique school improvement initiative within the province of Alberta. The following attributes/characteristics describe AISI:

1. *Partnership* — AISI is a partnership between teachers, superintendents, trustees, business officials, universities, parents, and government. The AISI partnership has resulted in building trust, collaboration, and teamwork among the education partners who represent diverse perspectives in providing education for children from kindergarten to grade 12. Students are the beneficiaries of this strong and diverse partnership. By working together, the partners develop and strengthen relationships, strategies, and practices that will provide long-term benefits to teaching and learning.

2. *Catalyst* — AISI is a catalyst for change. The shared commitment to enhancing school effectiveness, targeted funding, strong partnerships, and supportive infrastructure all contribute to supporting significant change in teaching practice and student learning. The AISI vision of systemic and sustainable school improvement is being realized in our schools every day.

3. *Student focused* — AISI is focused on what works to enhance student learning. It communicates a compelling vision of school improvement that aligns with achievement of the long-term vision of Alberta Learning — the best learning system in the world. Students are active participants in their education and teachers are engaged as members of collaborative learning teams that include their colleagues, parents and other education partners.

4. *Flexibility* — The AISI goal – to improve student learning and performance through identification of local needs and priorities – focuses attention on student learning while permitting those who deliver education maximum flexibility to address these local priorities in a community context.

5. *Collaboration* — AISI builds on collaborative processes that foster the sharing of promising practices as an important outcome of all AISI projects.

6. *Culture of Continuous Improvement* — AISI promotes development of learning communities and nurtures a culture of continuous improvement. Meaningful and sustainable school improvement requires commitment, alignment and mobilization of efforts to improve student learning and enhance educational practice. Professional development and ongoing administrative support are important elements in helping educators realize the goal of continuous improvement.

7. *Evidence-based Practice* — AISI projects are designed to establish empirical evidence through effective data collection, organization and analysis that attainment of specific goals, targets, strategies and performance measures have enhanced educational practices and produced measurable benefits to student learning and performance. The use of multiple assessment methodologies and data sources will give Albertans confidence in the results. As the body of evidence on successful practices emerges, government will review the findings and consider how these practices will impact education in the province.

8. *Research-based Interventions* — Key project themes relate primarily to literacy, numeracy, early intervention, differentiated learning, and technology. Also noted are projects that focus on meeting the diverse learning needs of First Nations, Métis and Inuit (FNMI) students, Francophone students, and students with special needs, including those who are gifted and talented, and those considered to be at-risk. All projects must provide a research base upon which the project is designed to ensure a reasonable expectation that improvement will occur given the implementation of proposed instructional strategies, AISI projects establish the efficacy of these interventions in the Alberta context.

9. *Inquiry and Reflection* — Many factors impact student learning. A decline in attainment of a particular measure needs to be investigated in light of other sources of data in order to determine whether teaching strategies are effective. Strategies that did not work as predicted, or that produced unanticipated benefits in a particular context also contribute to understanding. Apparent failures can provide important indicators of what needs to change and why another approach might be more successful. Inquiry and reflection are critical components of the AISI continuous improvements initiative.

10. *Building Capacity and Sustainability* — Professional development is an essential cornerstone of AISI and, as such, critical to achieving the goal of continuous improvement. Both teachers and students benefit from the emerging knowledge, practices, and technologies developed through AISI. Teaching and learning resources developed and/or acquired through AISI also benefit Alberta's students. All partners in AISI share responsibility to ensure the learnings and successful strategies are integrated into teaching and learning practices within their schools. Sustainability and transfer of learning are important features of AISI within our province. AISI contributes to the body of knowledge about teaching, learning, and instructional improvement. This knowledge is shared through participation in AISI professional development workshops and activities, the annual conference and posting of project information and research on the AISI Clearinghouse.

Support for Implementation

Alberta Learning and the Education Partners Steering Committee (EPSC) recognize the importance of sustained support for implementation of AISI projects. Assistance with project management and professional development is key to building capacity of those actively engaged in design, implementation and assessment of the efficacy of AISI projects. To accomplish this, sub-committees of the EPSC sponsored a number of activities. The annual AISI conference, spring and fall school authority visitations and regional and provincial professional development sessions are several examples of the formal support provided. Alberta Learning also ensures that

School Improvement Branch staff members are responsive to emerging needs that support effective implementation of AISI projects and activities.

Clearinghouse

Sharing the learnings and results from the school improvement projects within and among schools and school authorities is key to achieving the goal of sustained continuous improvement. The Internet-based Clearinghouse disseminates information to a local and international audience that includes anyone who has access to the worldwide web. Developmental work began in July 2000 when the AISI Clearinghouse Education Partners Working Group was established. Access to and retrieval from the Clearinghouse is user-friendly and efficient. The Clearinghouse can be accessed through www.learning.gov.ab.ca/k_12/special/aisi/clearing_house.asp.

The primary purpose of the AISI Clearinghouse is to *share* what is learned through AISI projects about effective strategies that improve student learning and contribute to school improvement. The Clearinghouse serves as a *communications vehicle* that furthers discussion among educators and the public on school improvement. It permits viewers to access and retrieve information quickly and provides links to related materials. In addition to facilitating "teachers talking to teachers" about their experiences with school improvement, the Clearinghouse informs educational practice, policy development and decision-making at the local school, school authority, and provincial levels. It is also a credible database for educational researchers and analysts.

The *content* of the Clearinghouse will include the AISI project plans (proposals), reports, promising practices, products, tools and teacher insights regarding instructional strategies, professional development and project design and implementation as well as an annotated bibliography. It will provide a general synthesis of projects by user-selected categories in addition to rich descriptions of promising practices, tools, products and teacher insights currently being collected.

The Clearinghouse is *dynamic* (continuously updated) and *interactive* (contains extensive navigational capabilities). The AISI partners have envisioned it as a model of collective learning and insights gleaned from active pursuit of school improvement within the province of Alberta.

Funding

AISI funding is targeted which means funding is provided to school authorities in addition to basic instruction funding for specific local initiatives that are focused on improving student learning and performance. All school authorities in Alberta (ECS to grade 12) are eligible to receive AISI funding. The rate for 2001/2002 is $121 per registered student in grades 1 to 12 in public, separate, Francophone and charter school authorities, $73 for private school students (60% of public school funding), and $61 for Early Childhood Services (kindergarten) students.

In project years one and two, $136 million was available for use in AISI projects, $68 million for each year of operation. The separate funding allocations 1) for public, separate, francophone and charter school authorities and 2) for private schools and private ECS are attached in *Appendix A*.

Scope of Projects

There were 58 public and separate school jurisdictions, 5 Francophone authorities and 10 charter schools, who developed and implemented 471 AISI projects during 2001/2002. There were also 231 private school authorities (115 private school and 116 ECS private operators) in Alberta managing 247 AISI projects. This means a total of 718 projects were operational in the province during the second year of AISI. Almost all (95%) of the projects were designed to operate over three years.

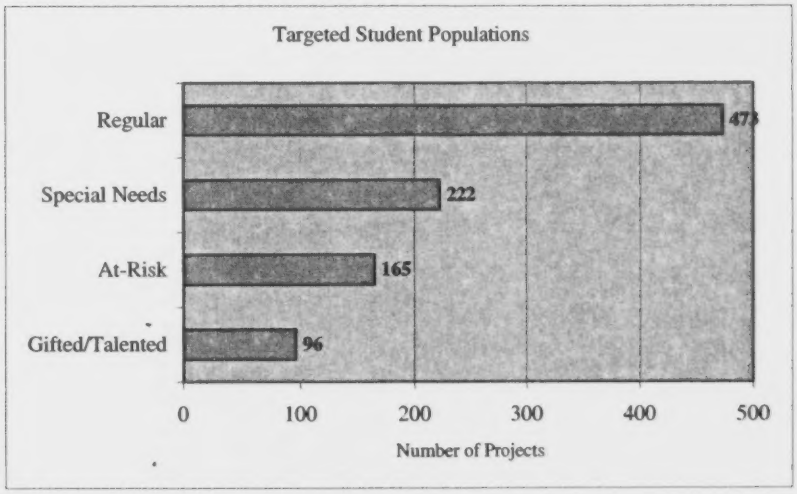
AISI Projects Categories

The following subsections provide a description of the AISI projects in the second year according to target population, themes and subjects, and teaching strategies. Appendix D provides the supporting tables for each figure in the subsequent sections of this chapter. There were no major changes in the categories from year one to year two. Apart from the addition of a few new projects the second year project categories are based on the approved project plans from year one.

Targeted Student Populations

Figure 1.1 presents the major groups of students targeted by AISI projects. A majority of AISI projects (473) targeted regular students. The "regular" category refers to projects that did not identify specific student populations and that applied a particular project intervention to all students in a class, grade, school or system. There were other projects that focused on particular groups of students such as students with severe, mild or moderate disabilities referred to in this report as students with special-needs (222 projects), students who are gifted and talented (96 projects), or students considered at-risk or disadvantaged academically, economically or socially (165 projects). A number of projects targeted more than one of the student population groups.

Figure 1.1: Student Populations Targeted by AISI Projects



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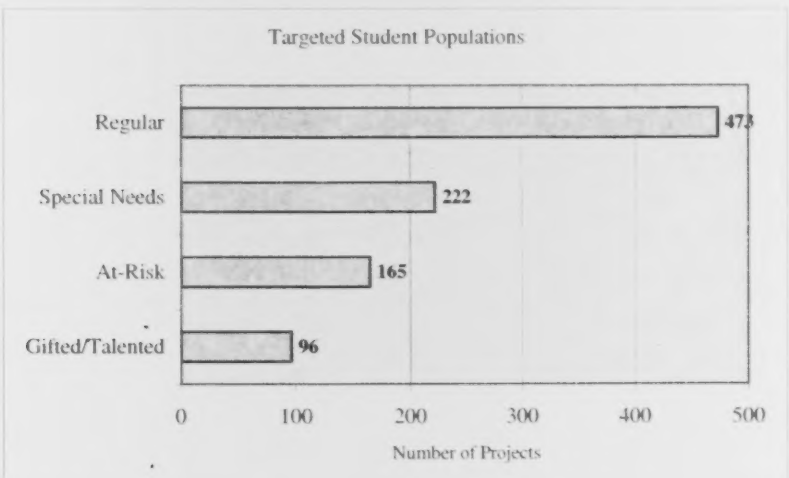


Area of Project Focus

The major themes for the AISI projects (Figure 1.2) were technology integration (124 projects), early intervention (81 projects), and parent and community involvement (80) projects. There were 69 projects, primarily from private ECS operators, that focused on ECS readiness. Many school authority projects identified more than one theme for their projects. Implementation of projects was supported through professional development and the purchase of resources related to the project focus.

Figure 1.2: Major AISI Project Focus

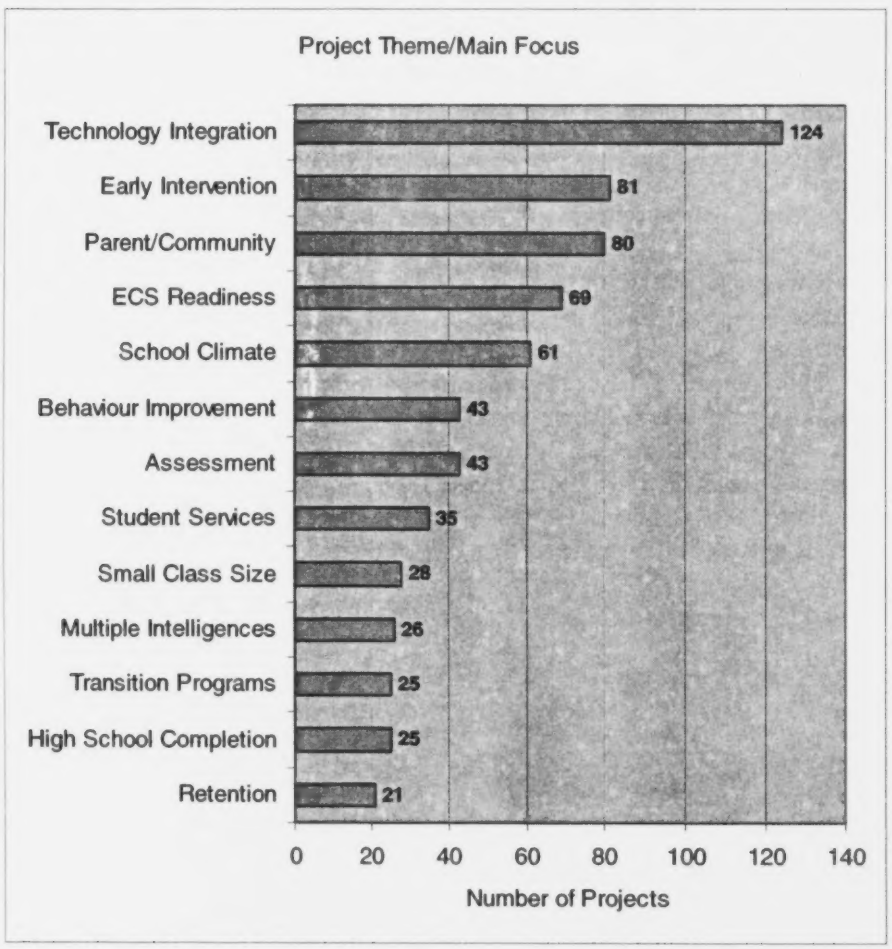
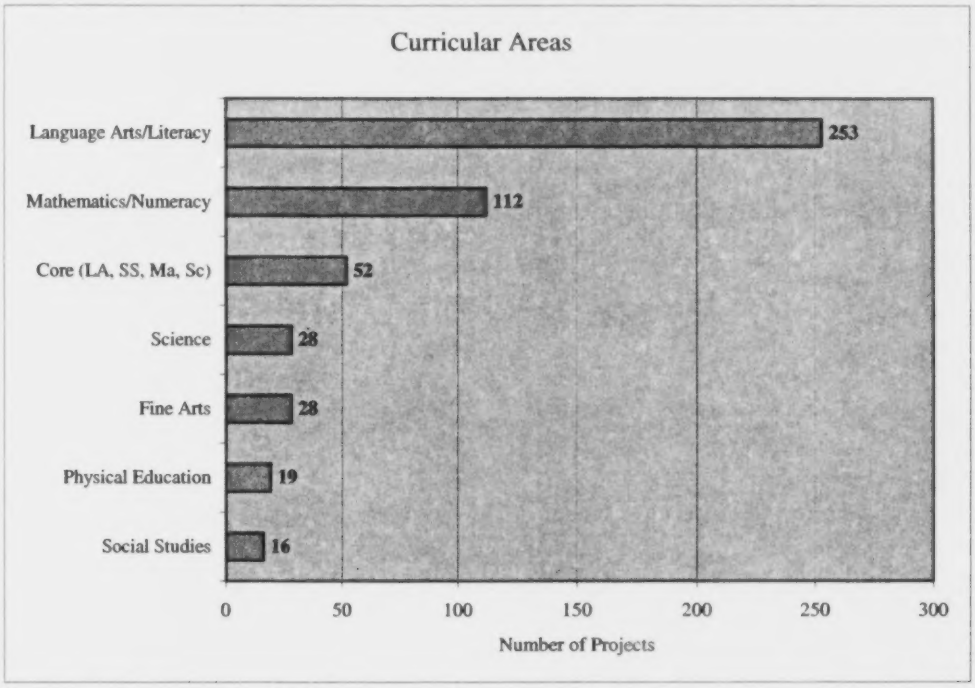


Figure 1.3 presents the major curricular areas of focus. Overwhelmingly, literacy (253 projects) and mathematics (112 projects) were selected as foundational to improving student learning. Other projects targeted one or two core subjects such as science (28 projects) and social studies (16 projects) or elective subjects such as fine arts (28 projects) and physical education (19 projects).

Figure 1.3: Curricular Focus of AISI Projects



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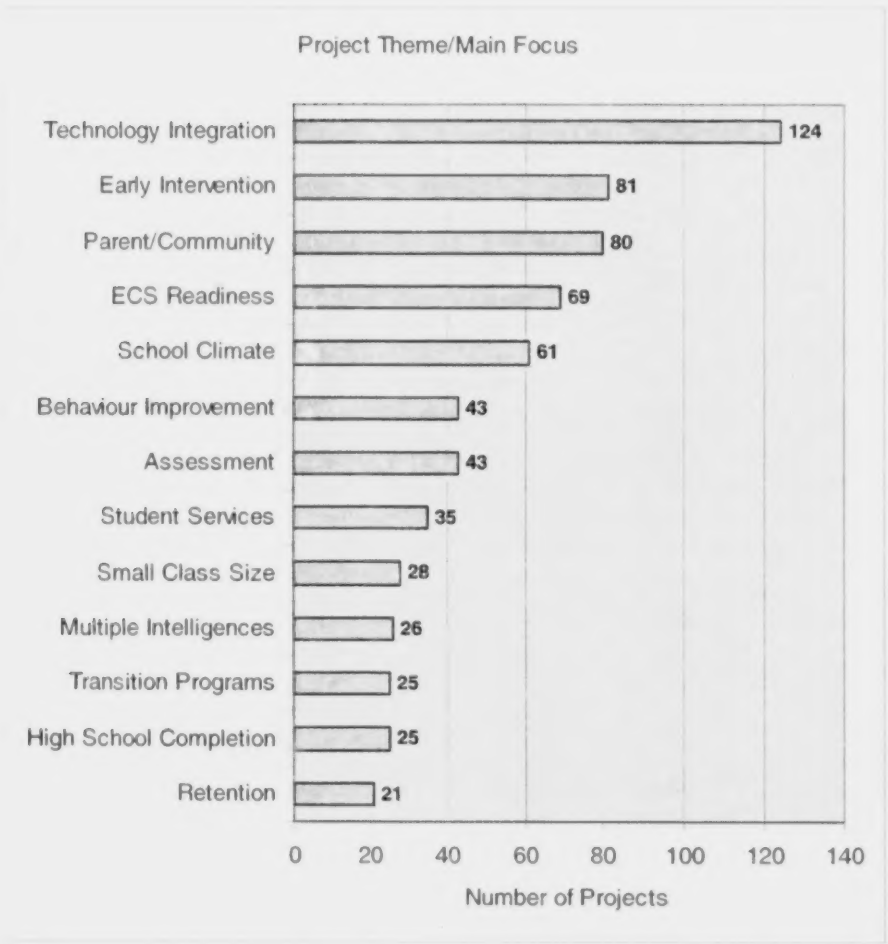

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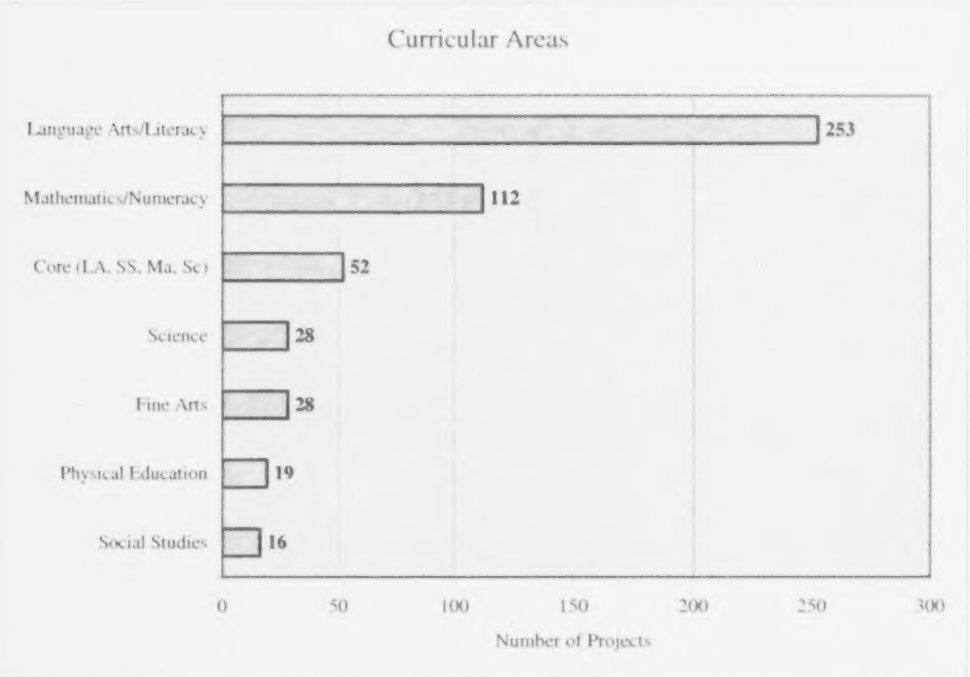
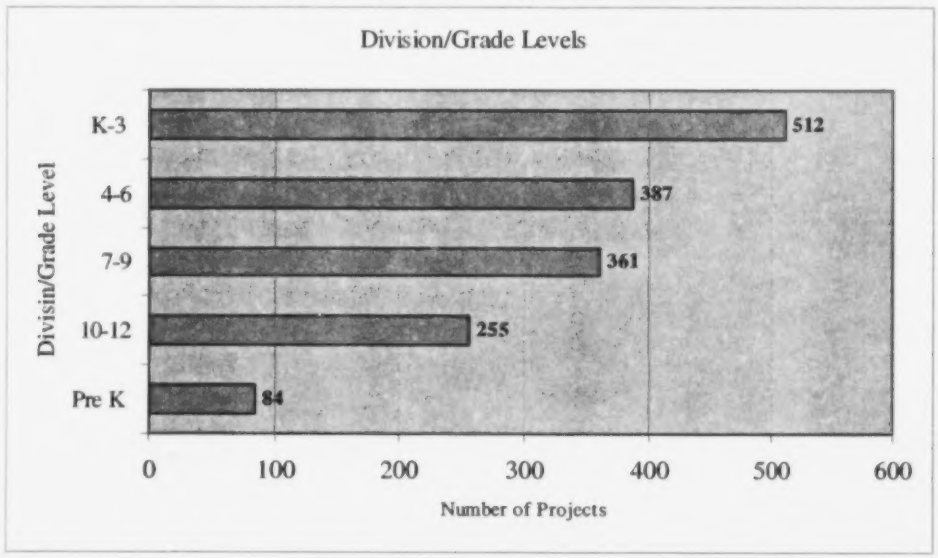


Grade Levels

Figure 1.4 presents the distribution of projects across grade levels. This graph is not meant to be representative of the grade configuration of participating AISI schools. The majority of projects focussed on students in the elementary (kindergarten to grade 6) and junior high (grades 7 to 9) levels. About a third of the projects (255) included high school (grades 10 to 12) students. Eighty-four projects (12%) included pre-school children (those not yet in kindergarten). These were predominately from private ESC operators.

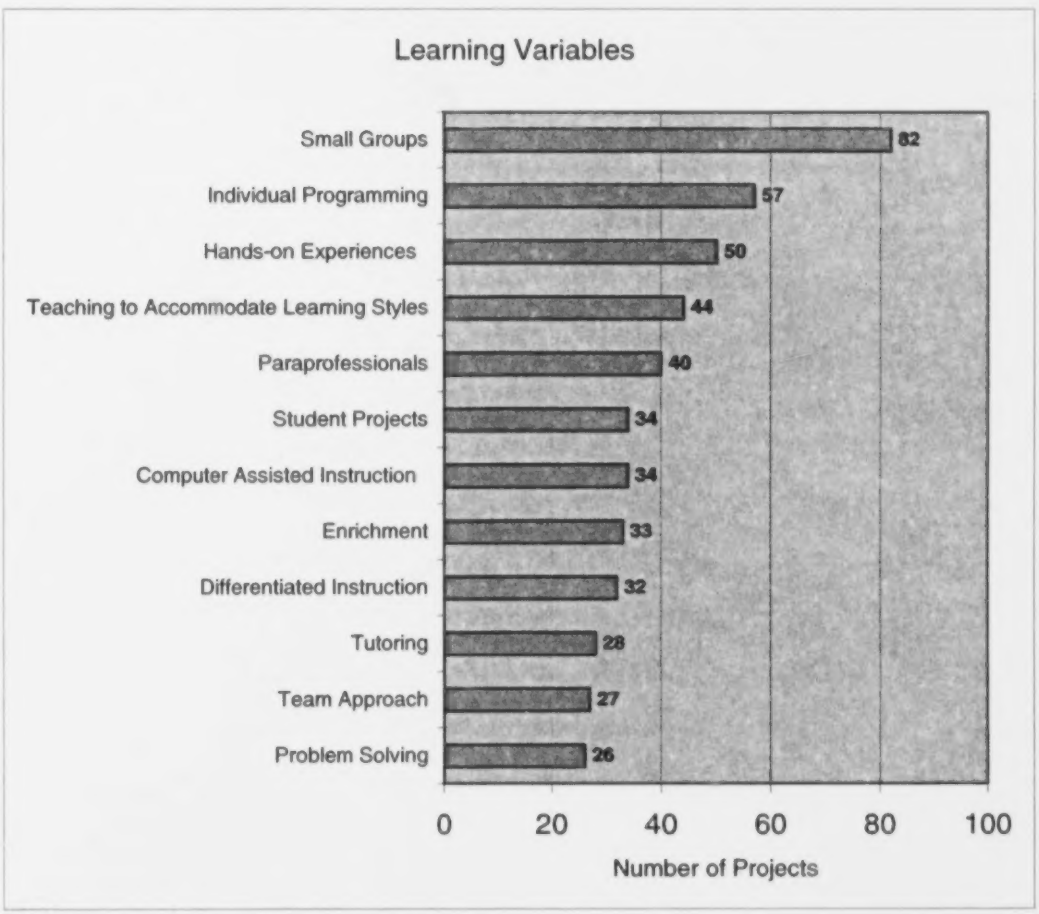
Figure 1.4: AISI Projects By Division/Grade Level



Learning Variables

Figure 1.5 presents the results in descending order of frequency of the 12 most common learning variables. Most projects used a combination of instructional strategies to improve student learning. Interactive or experiential instructional strategies were the most frequently cited pedagogical intervention followed by instruction designed to accommodate individual learning styles. In addition to these, 82 projects used small group instruction as a method of enhancing instruction to students and 57 projects reported individualizing programming or providing one on one assistance for variable lengths of time to support student learning. In 40 projects, use of paraprofessionals to assist in meeting diverse learning needs of students was noted.

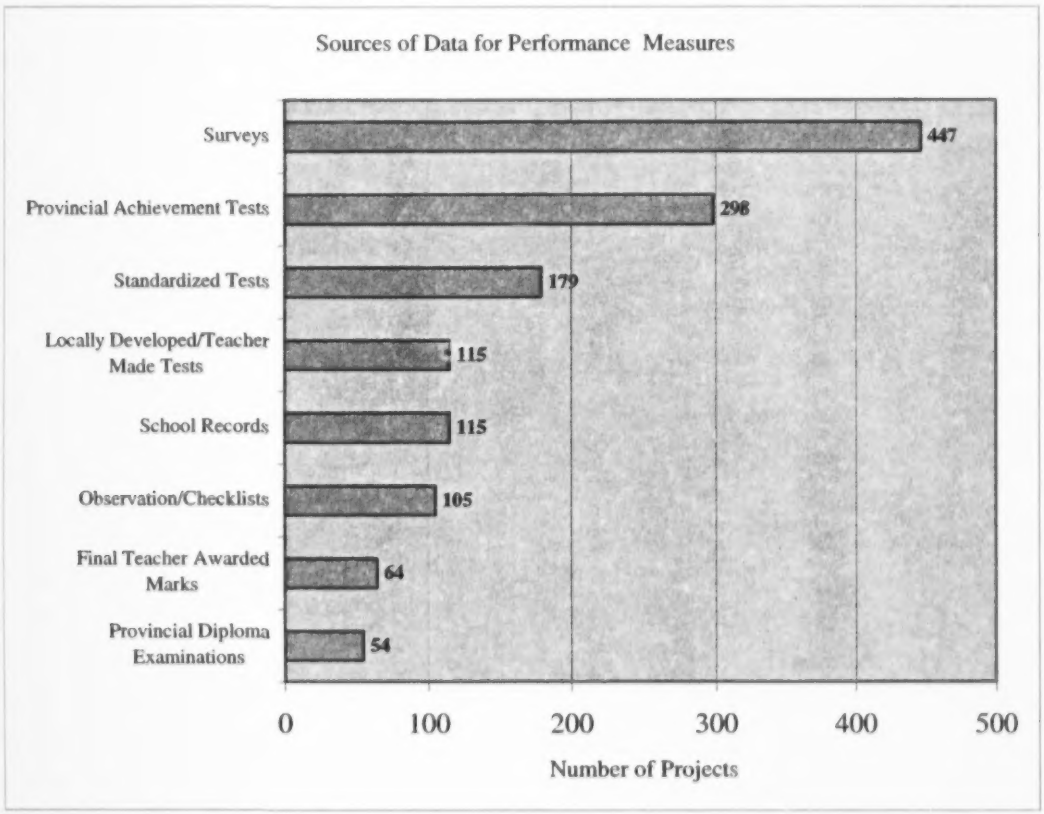
Figure 1.5: Learning Variables in AISI Projects



Types of Measures

Every project had at least one quantitative measure of student learning. Sources of data included Provincial Achievement Tests (PAT), Diploma Examinations (DE), standardized tests such as Canadian Tests of Basic Skills, Gates-MacGinitie Reading Tests, and locally developed assessments (see Figure 1.6). Other measures such as satisfaction surveys that were not directly related to student achievement were also used to provide evidence of student learning or attainment of project goals.

Figure 1.6: Sources of Data Used to Provide Evidence of Student Learning and Program Success



RESULTS ACHIEVED

Excellence is never an accident; it is always the result of high intention, determined effort, and skilled execution.

Unknown

This section presents the results of AISI projects reported by schools as well as an independent analysis of Provincial Achievement Test (PAT) and Diploma Examination (DE) results to determine improvements in achievement for those students the AISI projects were designed to support. The first part of this section outlines the statistical measures and procedures used to analyze project results followed by the first and second year results and an interpretation of these results. The last section addresses the impact of the AISI projects on PAT results, which serve as an additional source of evidence to validate the school authority results. Every project plan had a set of measures and an established baseline used to determine the impact of the project on student learning. Yearly targets were set and results were reported at the end of each year. The type of measures and the comparison of results to the baseline data determined project results.

Types of Performance Measures

Every project plan included a set of performance measures used to evaluate success. These measures fell under two broad categories:

1. student learning measures directly related to student achievement
2. qualitative and other measures not directly related to student achievement such as satisfaction and attitudes of students, parents or teachers.

Student learning measures included PAT and DE results, locally-developed test/assessment results, and results from other locally administered tests. The qualitative measures included satisfaction, attitudes, behaviour, and other program implementation measures such as the number of workshops held and the number of technology outcomes integrated into the curriculum.

A summary of types of measures is shown in Table 3.1. The number and type of measures were not the same for the first and second years because several projects made modifications to their measures after reviewing their first year results. Some of the measures that were not providing useful information were replaced with more appropriate ones. In addition, some of the second year targets were revised or made more stringent to ensure continuous improvement.

Table 3.1. Types of Measures Used to Determine AISI Project Results

	2001				2002			
	Projects		Measures		Projects		Measures	
	No.	%	No.	%	No.	%	No.	%
Student Learning Measures								
• Provincial Achievement Tests	272	50.7	841	34.5	252	42.9	978	29.3
• Standardized/Locally Developed Tests	234	43.6	581	23.9	341	58.0	934	28.0
• Diploma Examinations	27	5.0	68	2.8	40	6.8	95	2.8
Qualitative/Other Measures								
• Student Satisfaction Surveys	144	26.8	281	11.5	203	34.5	363	10.9
• Parent Satisfaction Surveys	152	28.3	221	9.1	201	34.2	270	8.1
• Teacher Satisfaction Surveys	110	20.5	169	6.9	169	28.7	250	7.5
• Program Support Measures	84	15.6	119	4.9	126	21.4	198	5.9
• Teacher Growth/Changes in Practice	21	3.9	77	3.2	21	3.6	126	3.8
• Student Behaviour Measures	55	10.2	79	3.2	55	9.4	120	3.6

Methods of Determining Project Effects

Four analyses were performed on the data to determine project success:

1. *Results That Met or Exceeded Their Targets* —Every project identified targets for each of the performance measures they used. This analysis compared the actual results with the targets to determine the number of measures where results met or exceeded their targets. Projects were then grouped into four categories.
   - Projects that met or exceeded targets on all of their measures.
   - Projects that met or exceeded targets on the majority (50% or more) of their measures.
   - Projects that met or exceeded targets on a minority (1–49%) of their measures.
   - Projects that met or exceeded targets on none of their measures.

2. *Results That Improved Over the Baseline* — We also looked at the measures that showed improved results over the baseline and analyzed the projects by the proportion of their measures that showed results that exceeded baseline. The results were reported with the following categories.
   - Projects with all measures showing improvement over the baseline.
   - Projects with the majority of their measures (50%) or more showing improvement over the baseline.
   - Projects with the minority of measures (1 – 49%) showing improvement over the baseline.
   - Projects that showed no improvement over the baseline on any of their measures.

3. *Magnitude of Project Effects Analysis* — In order to determine the extent to which AISI projects improved over the baseline, all the data (baseline and results) were converted to a common scale (standard scores) that permits comparison of improvement regardless of the type of measure (test, survey, etc.) that the school authorities used. The difference between the baseline data and the actual results for each measure in standard scores is equivalent to an effect size in a study involving a control group and an experimental group. **Effect size** is the difference between two groups such as a treatment and a control group that takes into consideration the spread (standard deviation) of the results within each group. It is a way of quantifying the effectiveness of a particular intervention. Appendix B provides detailed information on how effect sizes are calculated.

   In order to calculate meaningful effect sizes it was assumed that the baseline results are equivalent to control group results and the students whose results were included in the baseline data are similar in characteristics to the students who were assessed for the project outcomes.

   The effect sizes for each measure were determined by the difference calculating between the z scores for the baseline and the first and second year results. The results were then averaged over all the measures for each project and weighted by the number of students involved in each measure. Project effect sizes were calculated for two categories of measures: student learning measures and other measures. These average effect sizes were grouped into categories of minimum or no effect (less than 0.2), small (0.2 to 0.3), medium (0.4 to 0.7), and large (0.8 or higher).

   Confidence Intervals of Effect Size. Since the effect sizes were based on a sample of projects and students they are only estimates of the actual effect sizes if all projects and students were included. Because an estimate is based on a sample and is rarely exact, it is established practice to provide a range of effect sizes within which the actual effect size is likely to fall. The **confidence interval** indicates the precision of the estimated effect size. A narrow confidence interval means a more precise effect size while a very wide confidence interval may indicate the need for additional information.

   Interpreting Effect Sizes. Hattie (1992) reviewed 165,258 meta-analytic studies that related various innovations to achievement and the overall average effect size of the innovations listed turned out to be **.40**. This number provides us with a useful rule of thumb for assessing the success of projects. As Hattie notes, most interventions have a positive influence on achievement. Many of these effects are statistically significant, but to claim success it may be more appropriate to show that a particular innovation exceeds the typical value of .40.

   Effect sizes can also be converted into **percentile gains** for a better understanding of the their magnitudes. An effect size of 0.4 means that the score of the average person who received the intervention exceeds the scores of 66% of an equivalent group that did not receive the intervention. It can also be expressed as a percentile gain of 16% percent for an average person as a result of the intervention. Similarly, an effect size of 0.8 represents a percentile

gain of approximately 29%. The equivalent percentile gains of various effect sizes can be found in Appendix C.

4. *Meta–Analysis* — One of the main advantages of using effect size is that effect size estimates from different studies can be combined to give an overall best estimate of the size of the effect of a particular intervention. This process of synthesizing results of different studies into a single effect size estimate is called **meta-analysis**. Meta-analysis is important for identifying educationally useful interventions and programs because in most cases, a single study does not have the sample size required or the internal and external validity, to precisely estimate the impact of a program. This procedure was used to combine the results of several projects to determine the effect sizes for various types of project foci and strategies. Most of the AISI projects have multiple foci and strategies so it was difficult to place them in unique categories. However, an attempt was made to identify projects with a major focus on one of the most common categories to determine the combined effects. As a result the number of projects in some categories are quite small but each one contains at least 10 projects. A combination of project category, key word search and professional judgement was used to identify various projects that fit well under various categories (e.g. at-risk, early literacy, transition, small class size, etc). The combined effect sizes for the various project categories were calculated with a computer program for research synthesis called Comprehensive Meta Analysis (Borenstein and Rothstein, 1999).

Limitations

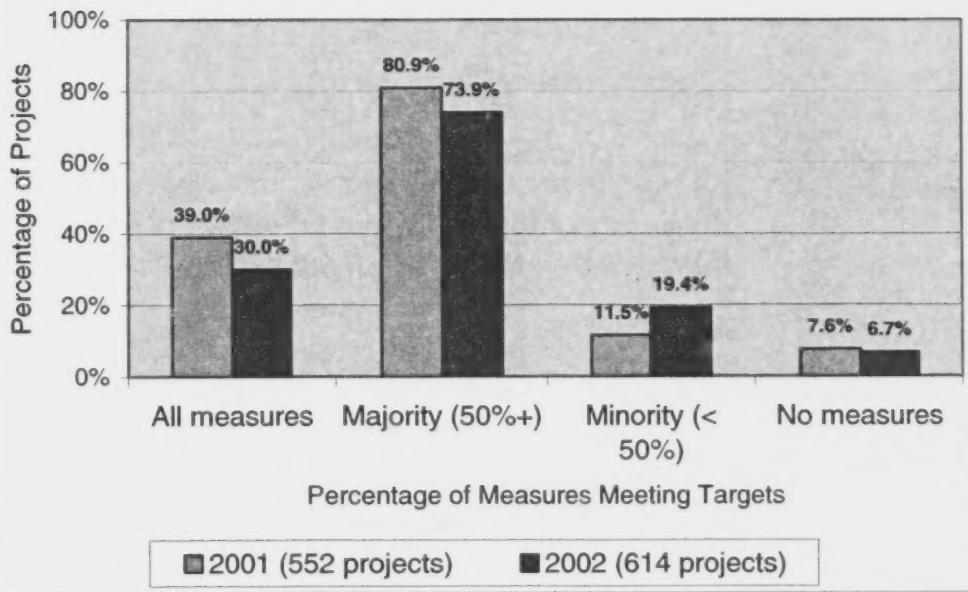
Project results are self reported and assumed accurate and valid as attested by the superintendent. Potential limitations to interpretation of results include variation in student population characteristics, individual implementation of instructional strategies, school contexts, and project design including selection and/or changes to targets and measures. Additionally, the impact of strategies employed within AISI projects, designed as three-year interventions, may not be fully realized at this time and may constitute an underestimation of project results.

Results on Targets and Baselines

All projects have a baseline and an improvement target for each quantitative and/or qualitative measure. The **baseline** shows student performance prior to the intervention or in some cases, during the first year of intervention. Project teams were required to set realistic improvement **targets** for each project year.

Figures 3.1 and 3.2 present summarized results for all approved projects for years one and two. Figure 3.1 shows, although the results are still high in both years, there was a slight decrease in the percent of projects meeting or exceeding targets in year two compared to year one. In year two, 30% of projects exceeded targets on all measures and 73.9% of projects exceeded targets on a majority (50%) of measures. Second year targets were not met by 6.7% of the projects.

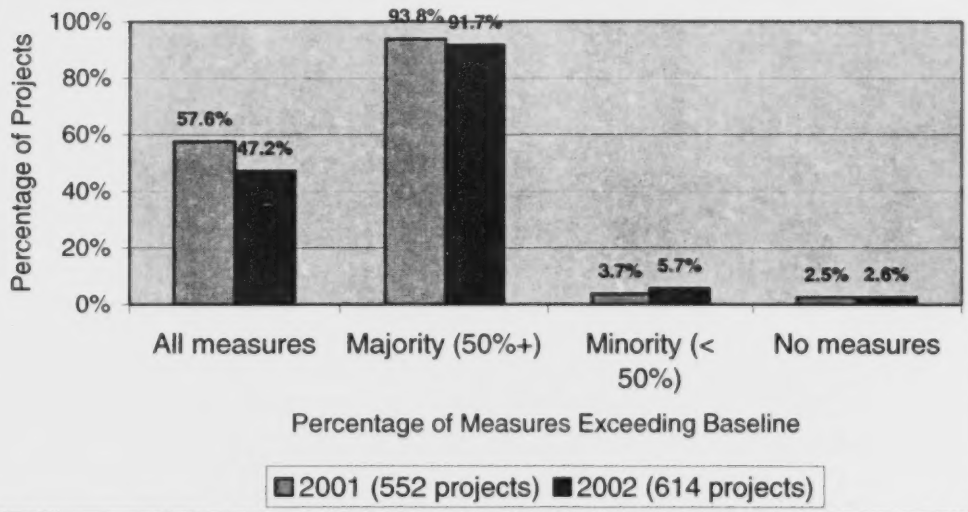
Figure 3.1: Percentage of Measures in Which Results Met or Exceeded Targets
(First and Second Year AISI Project Results)



The slight decrease noted may be due to the fact a number of projects set higher targets in year two based on the results obtained in year one. These adjustments are an indicator of the commitment to continuous improvement that is fundamental to the goals of AISI.

A similar slight decrease from year one to year two was observed where results are compared to baselines (Figure 3.2). In year two, 47.2% of the projects exceeded their baseline results on all of their measures and 92% of the projects exceeded baseline on the majority (50%) of their measures.

Figure 3.2: Percentage of Measures in Which Results Improved Over the Baseline
(First and Second Year AISI Project Results)



This slight decrease in year two results, when compared to baselines, may be an artifact of project design in that some projects used their first year results as a baseline, a decision that may have inflated the baseline for the second year due to the impact of first year interventions.

The targets and baselines results are separated into student learning (quantitative) and other (qualitative) measures in Figures 3.3 and 3.4. Overall, a higher percentage of targets were met for qualitative measures than quantitative measures. Qualitative measures also showed a higher percentage of improvement over baselines than did quantitative measures.

Figure 3.3: Percentage of Measures Meeting Targets
(Second Year Results by Type of Measure)

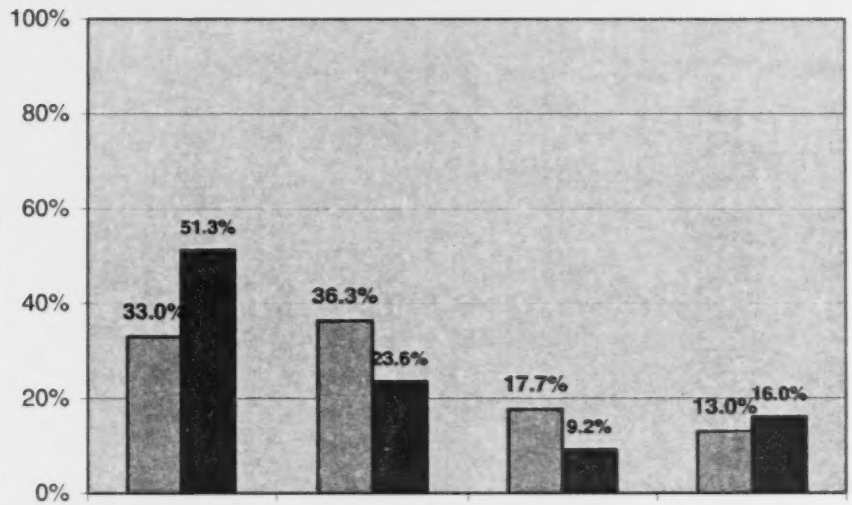
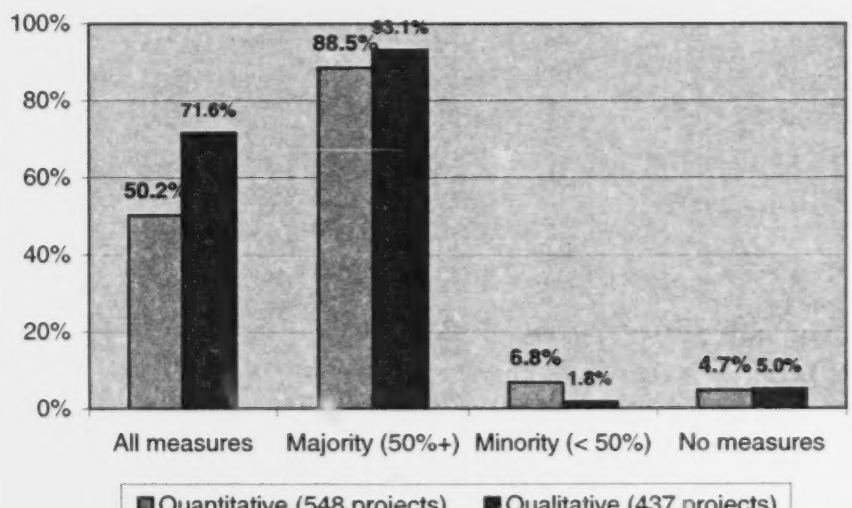


Figure 3.4: Percentage of Measures Improving Over the Baseline
(Second Year Results by Type of Measure)



These first and second year results demonstrate continuous improvement over baselines for both quantitative and qualitative measures. The qualitative results illustrate the continued

commitment and satisfaction that students, staff and parents feel for the AISI projects in which they participated. The power of the emotional investment of participants in AISI projects is a significant factor in the successful implementation of projects.

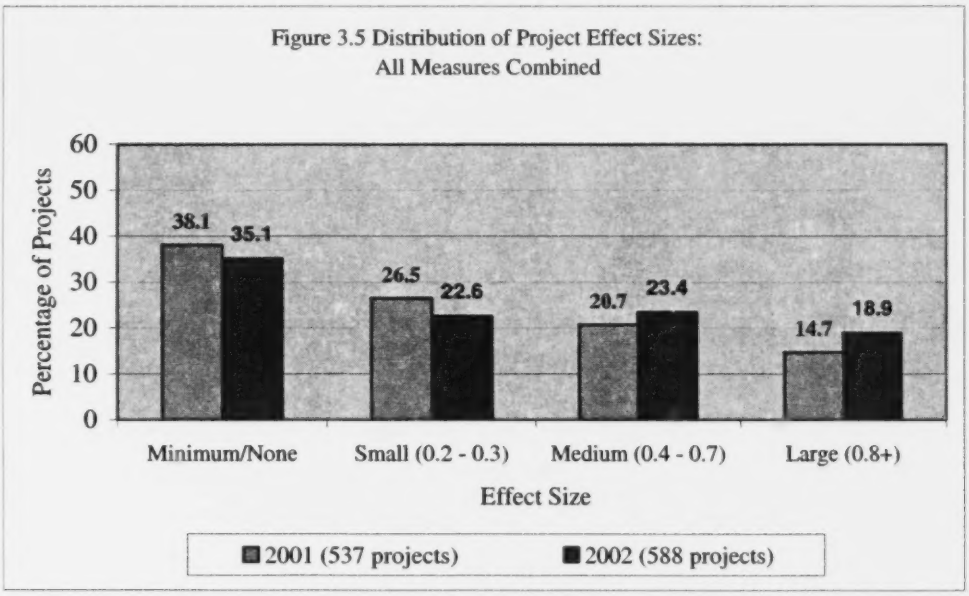
Magnitude of Project Effects

Effect size calculation converts all measures to a common scale and permits comparison of improvement regardless of the type of measure (test, survey, etc.) used.

Distribution of Project Effect Sizes

Figure 3.5 shows the distribution of project effect sizes for all measures combined. The comparison of year one to year two shows an increase in the number of projects that demonstrate medium and large effects sizes in year 2 and a decrease in the number of projects with minimum and small effect sizes. In year two, there were medium effect sizes in 23.4% of the projects. The size of the medium effect changes in year 2 ranged from 0.4 to 0.7, a percentile gain of 16% percentile points to 26% percentile points. Second year large effect size changes were noted in 18.9% of the measures with effect sizes greater than 0.8. This translates into percentile gains greater than 29% percentile points.

Figure 3.5 Distribution of Project Effect Sizes:
All Measures Combined

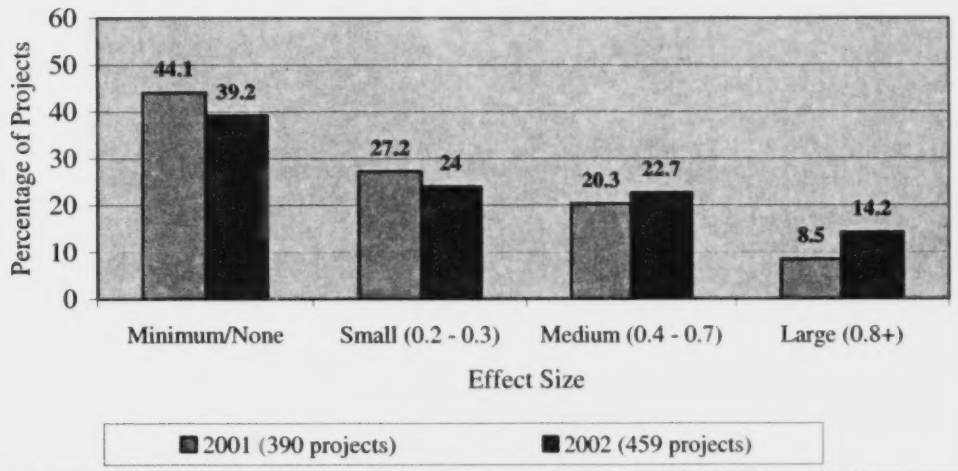


Average effect sizes:: 2001 = 0.37; 2002 = 0.42

The effect size results are important because they verify that student learning continued to improve in year two as compared to year one. This improvement may be due in part to the fact that most projects are in the second year of implementation where the impact of the innovation is more powerful and well established than was the case in year one.

Figure 3.6 illustrates the distribution of quantitative (student learning) measures. A similar trend to that noted for combined measures is found where more projects showed medium and large effect sizes for quantitative measures in year two than was observed in year one. Corresponding decreases in the number of projects with minimal to small effect sizes is also depicted.

Figure 3.6 Distribution of Project Effect Sizes:
Student Learning Measures



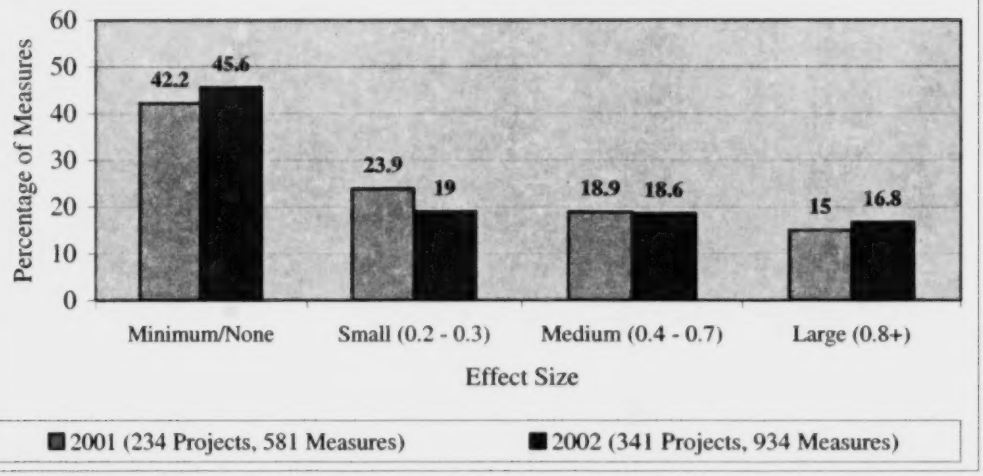
Average effect sizes:: 2001 = 0.27; 2002 = 0.33

The results shows an increased positive impact on student learning during the second year of implementation of AISI projects.

Provincial Achievement Test (PAT) results, Diploma Examination (DE) results and locally determined assessment of student achievement are subsets of student learning measures. The locally determined student learning measures analysis in Figure 3.7 shows the largest effect size gains, followed by PAT measures in Figure 3.8 and provincial DE measures in Figure 3.9.

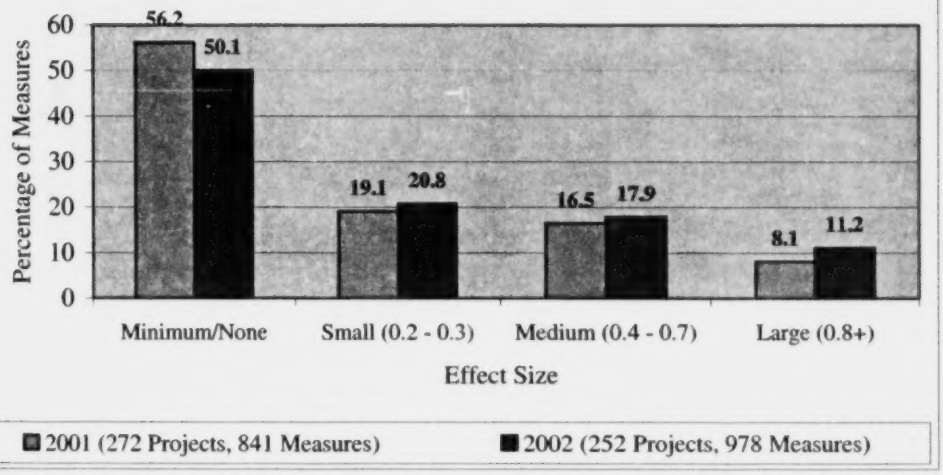
Effect sizes for locally determined student learning measures were higher than the effect size results based on PAT and DE measures. In year two, combined medium and large effect sizes occurred in 35.4% of projects using locally determined student learning measures, 29.1% of projects using PAT measures and 20% of projects using DE measures. The percentage of projects with medium to large effect sizes on PAT measures improved from 25% in year one to 29% in year two. There was a decline in the percentage of projects that had medium to large effect sizes on DE's from 38% in year one to 20% in year two.

Figure 3.7
Distribution of Project Effect Sizes:
Locally Determined Student Learning Measures



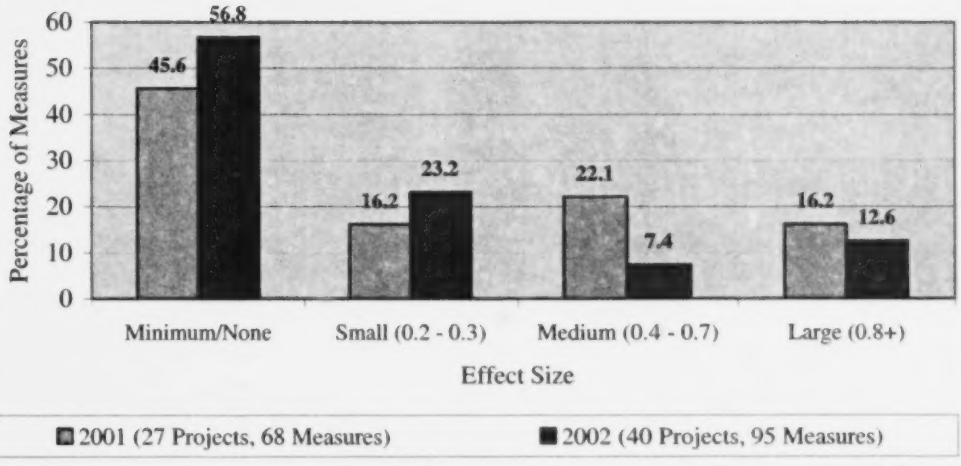
Average effect sizes: 2001 = 0.35; 2002 = 0.33

Figure 3.8
Distribution of Project Effect Sizes:
Provincial Achievement Test Measures



Average effect sizes: 2001 = 0.18; 2002 = 0.24

Figure 3.9 Distribution of Project Effect Sizes:
Diploma Examination Measures

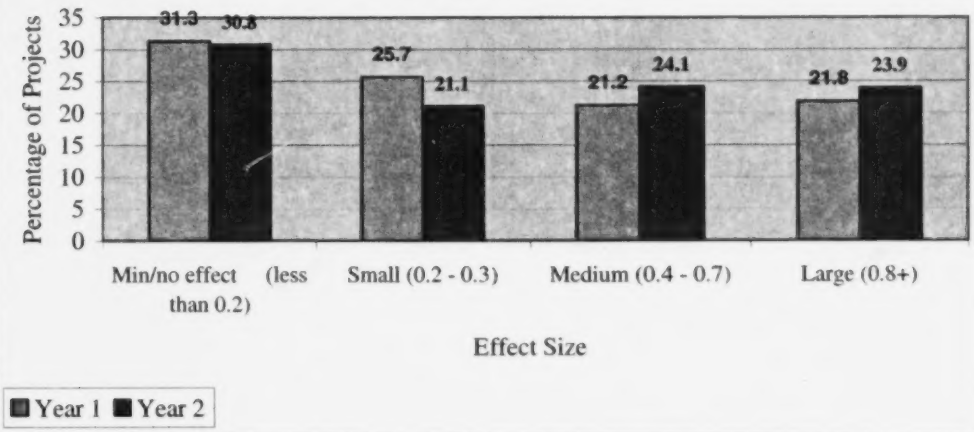


Average effect sizes: 2001 = 0.32; 2002 = 0.24

It is difficult to determine the factors that may have impacted student achievement on diploma examinations given the small sample size. Longitudinal data will assist in determining what factors have the greatest impact on enhancing student achievement for those writing diploma examinations, so that successful strategies can be replicated provincially.

Figure 3.10 presents effect sizes for qualitative measures. Again, the year one and year two comparisons show a greater percentage of projects achieving medium (24.1%) and large (23.9%) size effects in year two.

Figure 3.10
Distribution of Project Effect Sizes:
Qualitative Measures



Average effect sizes: 2001 = 0.49; 2002 = 0.51

These qualitative measures results confirm that satisfaction with AISI projects is being sustained and/or increased. The successes demonstrated by AISI projects are likely a major factor contributing to the increased satisfaction levels.

Meta -Analysis of AISI Projects

Meta analysis is useful in determining the impact of AISI projects with a specific focus such as literacy, mathematics, and information and communication technology, and identifying practices that contributed to achieving those results.

Targeted Student Groups

An analysis was conducted with first and second year data to assess the relative impact of AISI by targeted student groupings designated by school authorities as at-risk, special needs, gifted and talented and regular. A regular student is a category that included the entire population of a class, grade, school or project.

Table 3.2 provides a breakdown of the effect sizes for year one and year two in each of the four targeted student population categories. There are small to medium effect sizes for all categories in years one and two. The largest gains in combined student learning and qualitative measures are noted for students with special needs (0.33 to 0.54) and at-risk (0.42 to 0.47) students. A slight increase from 0.35 to 0.37 is noted for regular students. A slight decrease (0.25 to 0.2) is noted for students who are gifted and talented.

Table 3.2: Effect Sizes and Percentile Gains of AISI Projects Targeting Specific Student Populations (At-Risk, Special Needs, Gifted and Talented, Regular)

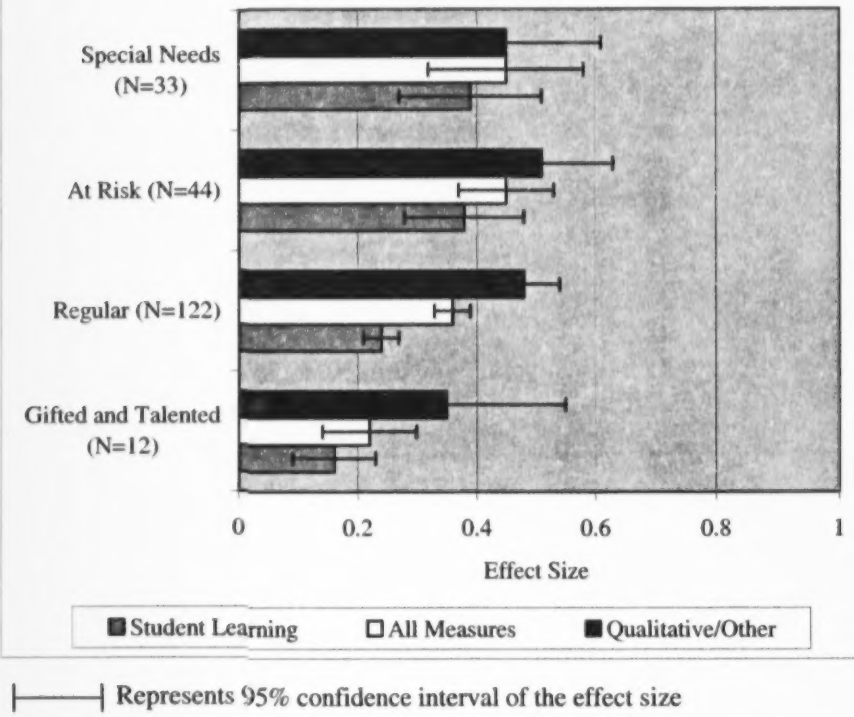
	2001			2002			2-Yr Average			
	N	Effect Size	%ile Gain	N	Effect Size	%ile Gain	Effect Size	%ile Gain	95% Confidence Interval	
									Lower	*Upper*
Student Learning Measures										
At-Risk	27	0.26	**10.3**	32	0.47	**18.1**	0.38	**14.8**	*11.0*	*18.4*
Special Needs	10	0.23	**9.1**	14	0.49	**18.8**	0.39	**15.2**	*10.6*	*19.5*
Regular	122	0.23	**9.1**	132	0.25	**9.9**	0.24	**9.5**	*8.3*	*10.6*
Gifted and Talented	8	0.18	**7.1**	10	0.12	**4.8**	0.16	**6.4**	*3.6*	*9.1*
Qualitative Measures										
At-Risk	30	0.56	**21.2**	32	0.48	**18.4**	0.51	**19.5**	*15.2*	*23.6*
Special Needs	26	0.33	**12.9**	29	0.53	**20.2**	0.45	**17.4**	*11.4*	*22.9*
Regular	106	0.47	**18.1**	117	0.50	**19.2**	0.48	**18.4**	*16.3*	*20.5*
Gifted and Talented	4	0.39	**15.2**	8	0.33	**12.9**	0.35	**13.7**	*6.0*	*20.9*
All Measures										
At-Risk	30	0.42	**16.3**	32	0.47	**18.1**	0.45	**17.4**	*14.4*	*20.2*
Special Needs	26	0.33	**12.9**	29	0.54	**20.5**	0.45	**17.4**	*12.6*	*21.9*
Regular	122	0.35	**13.7**	132	0.37	**14.4**	0.36	**14.1**	*12.9*	*15.2*
Gifted and Talented	8	0.25	**9.9**	10	0.20	**7.9**	0.22	**8.7**	*5.6*	*11.8*

Note: %ile = percentile
N = number of projects

The larger gains for students with special needs and at-risk students can be attributed to the impact of AISI projects designed to address their specific learning needs. Individualized program plans are required for all students with special needs. A slight decrease in the effect size for students who are gifted and talented is difficult to interpret, as this category included a small sample of 8 projects. This variation in results for students who are gifted and talented may be an artifact of the difficulty in demonstrating large gains for students who are already high achievers.

Figure 3.11 provides a comparison of two-year average effect sizes for the projects targeting specific student populations. The projects that appear to be making the greatest impact, both on student learning and qualitative measures, tend to target students with special needs and at-risk students. Projects targeting regular students appear to be making a more modest impact on student learning.

Figure 3.11
2-Year Average Effect Sizes of Projects Targeting
Specific Student Populations



Represents 95% confidence interval of the effect size

Overall, the two-year average effect size gains for projects targeting specific student populations on all measures are as follows: at-risk = 0.45, a 17 percentile gain; special needs = 0.45, a 17 percentile gain; regular = 0.36, a 14 percentile gain; gifted and talented = 0.22, a 9 percentile gain. These percentile gains illustrate the relative impact of the various project categories.

Curricular Areas

An analysis was done on the subject areas of early literacy, mathematics, science and fine arts. Table 3.3 provides comparisons of year one and year two results. The effect size gains for student learning and qualitative measures in these subject areas decreased slightly in year two, but were relatively stable in comparison to that achieved in year one of AISI.

Table 3.3: Effect Sizes and Percentile Gains of AISI Projects in Selected Curricular Areas

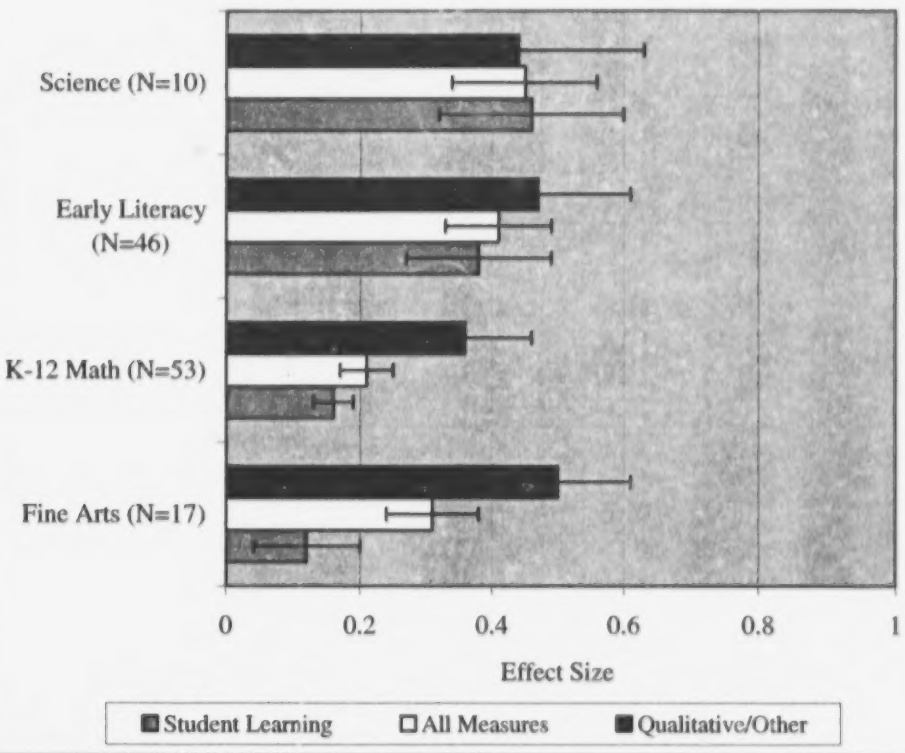
	2001			2002			2-Yr Average			
	N	Effect S Size	%ile Gain	N	Effect Size	%ile Gain	Effect Size	%ile Gain	*95% Confidence Interval* *Lower*	*Upper*
Student Learning Measures										
K-12 Math	46	0.16	**6.4**	49	0.15	**6.0**	0.16	**6.4**	*5.2*	*7.6*
Early Literacy	32	0.40	**15.5**	45	0.38	**14.8**	0.38	**14.8**	*10.4*	*19.2*
Science	9	0.54	**20.5**	9	0.34	**13.3**	0.46	**17.7**	*12.2*	*23.3*
Fine Arts	12	0.15	**6.0**	9	0.09	**3.6**	0.12	**4.8**	*1.6*	*8.0*
Qualitative Measures										
K-12 Math	24	0.30	**11.8**	34	0.40	**15.5**	0.36	**14.1**	*10.1*	*18.0*
Early Literacy	16	0.49	**18.8**	24	0.45	**17.4**	0.47	**18.1**	*12.5*	*23.6*
Science	5	0.55	**20.9**	6	0.39	**15.2**	0.44	**17.0**	*9.5*	*24.5*
Fine Arts	11	0.55	**20.9**	6	0.47	**18.1**	0.50	**19.1**	*14.8*	*23.5*
All Measures										
K-12 Math	46	0.23	**7.5**	49	0.19	**9.1**	0.21	**8.3**	*6.7*	*9.9*
Early Literacy	32	0.43	**16.6**	45	0.40	**15.5**	0.41	**15.9**	*12.7*	*19.1*
Science	9	0.54	**20.5**	9	0.38	**14.8**	0.45	**17.4**	*13.0*	*21.7*
Fine Arts	12	0.35	**13.7**	9	0.29	**11.4**	0.31	**12.2**	*9.4*	*15.0*

Note: %ile = percentile

The decrease in effect size for student learning measures, although not significant, may be a result of decisions to set higher measures and targets for year two, or may reflect the fact that continued improvement of student learning, although evidenced, did not match the growth noted during the initial year of implementation.

Figure 3.13 provides a comparison of two-year average effect sizes for the related subject areas. The projects that appear to make the greatest impact on both student learning and qualitative measures are science projects followed by early literacy projects. Fine arts projects show the third largest of all measures effect size gains and the largest qualitative effect size gain of the subject areas. The mathematics project effect size for combined measures is the smallest, although on measures of student learning the effect size noted for these projects exceeded that observed for projects with a fine arts focus.

Figure 3.13
2-Year Average Effect Sizes of Selected Curricular Areas



Represents 95% confidence interval of the effect size

When examining the impact on student learning by curricular themes, it is important to consider the number of projects as well as effect size gains. The largest effect size gains were observed for science projects that incorporated a discovery approach to learning that actively engaged student by involving them in "hands on" activities, using minipulatives and real world problem solving. Although the number of projects with this focus is small, use of these instructional strategies may enhance student learning in other curricular areas. Early literacy projects also demonstrated large gains on student learning measures. Use of instructional strategies that actively engage students in learning activities and involvement of parents as partners in reinforcing skill development were also noted as important to learner success. Effect sizes in mathematics and fine arts, although smaller, continue to demonstrate a positive impact on student learning and performance.

Overall, the two-year effect size gains for subject areas are as follows: science = 0.45, a 17 percentile gain; early literacy = 0.41, a 16 percentile gain; fine arts =0.31, a 12 percentile gain; and mathematics =0.21, an 8 percentile gain.

Project Themes

Table 3.4 presents analyses for the Early Intervention, Technology Integration, Transition to Secondary School, School Completion, and Small Class Size project themes. Technology Integration showed the largest increase in effect size from year one to year two, followed closely by Transition to Secondary Schools projects. The Small Class Size projects showed an increase from year one to year two when qualitative measures were included. Increases to student learning for projects whose focus was small class size demonstrated small effect sizes over both years even though a number of projects included specific instructional strategies to enhance student learning as part of their projects. Early Intervention and Improving High School Completion projects maintained the strong effect size gains seen in year one and remain in the medium effect size category.

Table 3.4: Effect Sizes and Percentile Gains of Selected AISI Project Themes

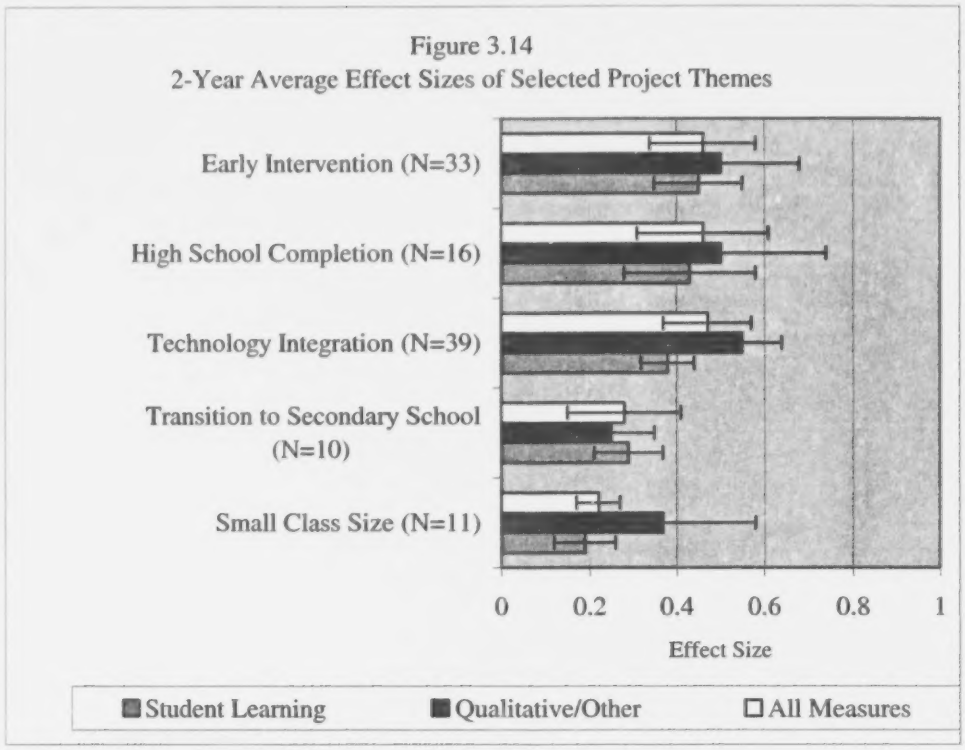
	2001			2002			2-Yr Average			
	N	Effect Size	%ile Gain	N	Effect Size	%ile Gain	Effect Size	%ile Gain	*95% Confidence Interval*	
									Lower	*Upper*
Student Learning Measures										
Technology Integration	21	0.28	**11.0**	25	0.46	**17.7**	0.38	**14.8**	*10.8*	*18.8*
Early Intervention	25	0.48	**18.4**	30	0.42	**16.3**	0.45	**17.4**	*12.6*	*22.1*
High School Completion	11	0.30	**11.8**	15	0.53	**20.2**	0.43	**16.6**	*10.7*	*22.6*
Transition to Secondary School	9	0.23	**9.1**	11	0.38	**14.8**	0.29	**11.4**	*6.2*	*16.6*
Small Class Size	9	0.20	**7.9**	11	0.18	**7.1**	0.19	**7.5**	*5.5*	*9.5*
Qualitative Measures										
Technology Integration	24	0.51	**19.5**	32	0.59	**22.2**	0.55	**20.9**	*17.3*	*24.5*
Early Intervention	12	0.46	**17.7**	16	0.52	**19.8**	0.50	**19.1**	*12.0*	*26.3*
High School Completion	10	0.74	**27.0**	16	0.33	**12.9**	0.50	**19.1**	*9.7*	*28.6*
Transition to Secondary School	8	0.25	**9.9**	11	0.27	**10.6**	0.25	**9.9**	*5.9*	*13.9*
Small Class Size	6	0.25	**9.9**	9	0.48	**18.4**	0.37	**14.4**	*6.1*	*22.7*
All Measures										
Technology Integration	24	0.39	**15.2**	32	0.53	**20.2**	0.47	**18.1**	*15.7*	*20.5*
Early Intervention	25	0.47	**18.1**	30	0.45	**17.4**	0.46	**17.7**	*13.7*	*21.7*
High School Completion	11	0.50	**19.1**	16	0.43	**16.6**	0.46	**17.7**	*11.8*	*23.7*
Transition to Secondary School	9	0.22	**8.7**	11	0.33	**12.9**	0.28	**11.0**	*7.8*	*14.2*
Small Class Size	9	0.20	**7.9**	11	0.24	**9.5**	0.22	**8.7**	*5.9*	*11.5*

Note: %ile = percentile

Technology Integration, Early Intervention and High School Completion are provincial priorities and results demonstrate improvement in AISI projects with these areas of focus. Research is congruent with AISI findings showing improvements to student learning are minimal where small class size is the only intervention.

The two-year average effect sizes comparison in Figure 3.14 shows gains for all themes, the largest for Technology Integration and High School Completion and Early Intervention. Transition to Secondary School and Small Class Size projects made small gains in year two of AISI.

Figure 3.14
2-Year Average Effect Sizes of Selected Project Themes



Represents 95% confidence interval of the effect size

Two-year average effect size gains are as follows: Technology Integration = 0.47, an 18 percentile gain; Early Intervention and High School Completion = 0.46, a 17 percentile gain; Transition to Secondary School = 0.28, an 11 percentile gain; and Small Class Size =0.22, a 9 percentile gain.

Selected Learning Variables

The selected learning variables included:

- individual/small group instruction
- differentiated instruction
- computer-assisted instruction.

Differentiated instruction and individual/small group instruction (Table 3.5) showed the largest increases related to student learning from year one to year two. Projects using commercially developed computer programs (Table 3.5) to assist students in the areas of mathematics and literacy demonstrated small effect sizes gains for student learning.

Table 3.5: Effect Sizes and Percentile Gains of Selected Learning Variables used in AISI Projects

	2001			2002			2-Yr Average			
	N	Effect Size	%ile Gain	N	Effect Size	%ile Gain	Effect Size	%ile Gain	95% Confidence Interval Lower	Upper
Student Learning Measures										
Differentiation	17	0.18	**7.1**	21	0.30	**11.8**	0.24	**9.5**	*7.1*	*11.9*
Individual/Small Groups	21	0.28	**11.0**	23	0.40	**15.5**	0.33	**12.9**	*8.2*	*17.7*
Computer Programs (Lit/Math)	18	0.16	**6.4**	21	0.14	**5.6**	0.15	**6.0**	*3.6*	*8.4*
Qualitative Measures										
Differentiation	15	0.36	**14.1**	21	0.39	**15.2**	0.38	**14.8**	*10.4*	*19.2*
Individual/Small Groups	19	0.56	**21.2**	22	0.49	**18.8**	0.52	**19.8**	*12.3*	*27.4*
Computer Programs (Lit/Math)	10	0.32	**12.6**	14	0.33	**12.9**	0.31	**12.2**	*7.4*	*16.9*
All Measures										
Differentiation	17	0.23	**9.1**	21	0.34	**13.3**	0.29	**11.4**	*9.0*	*13.8*
Individual/Small Groups	21	0.41	**15.9**	23	0.44	**17.0**	0.43	**16.6**	*12.3*	*21.0*
Computer Programs (Lit/Math)	18	0.17	**6.7**	21	0.20	**7.9**	0.19	**7.5**	*5.5*	*9.5*

Note: %ile = percentile

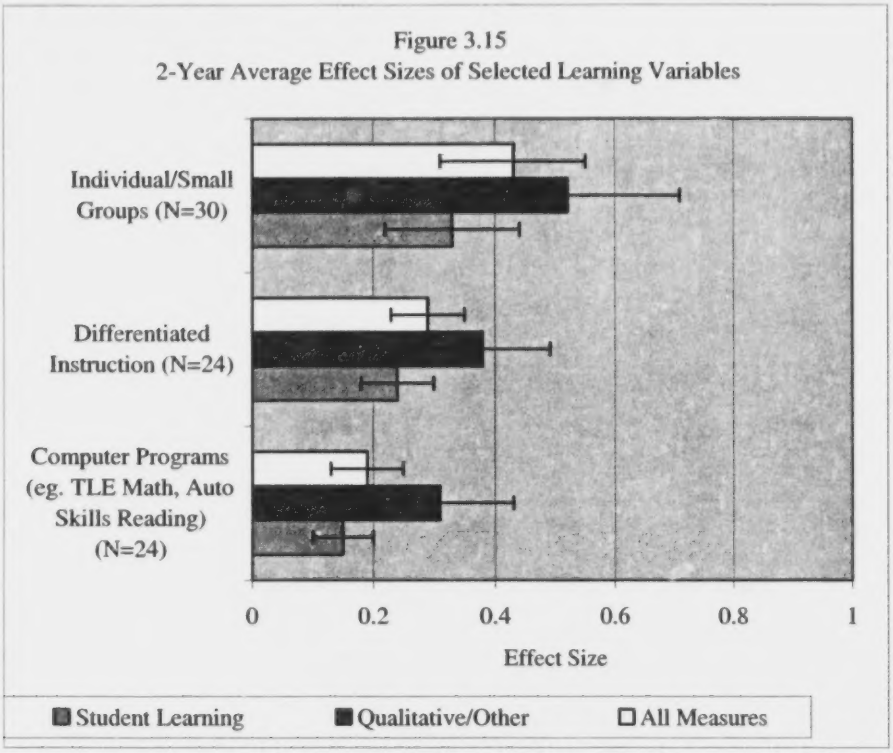
Learning variables include use of specific instructional strategies, commercially developed computer programs, and student groupings to improve student learning. The most frequently cited instructional strategy used was differentiated instruction. Use of individual and small group settings for variable lengths of time to facilitate student learning was also identified as an important strategy.

The gains for Differentiated Instruction and Individual/Small Group Instruction may be related to increased frequency of student/teacher interaction and to individualized instructional strategies or interventions tailored to student learning needs. Exploration of characteristics of student populations receiving this support may assist in interpretation of results. Project data suggests that students with special needs and those considered at-risk participating in specific literacy programs such as Reading Recovery may be the predominant student populations utilizing individualized or small group intervention. Comments from project coordinators/leaders indicate the impact of professional development on instructional practice is frequently cited as a critical contributor to the success of the differentiated instruction strategy. The projects using commercial computer programs did not have as strong an impact on student

learning. It may be that these programs are effective in improving learning for some students and not others.

The two-year average effect size analysis in Figure 3.15 shows the following gains: Individual/Small Group Instruction =0.43, a 17 percentile gain; Differentiated Instruction = 0.29, a 10 percentile gain; and Computer Assisted Instruction = 0.19, a 7 percentile gain.

Figure 3.15
2-Year Average Effect Sizes of Selected Learning Variables



Represents 95% confidence interval of the effect size

Although there are a similar number of projects in each learning variable category, individual/small group settings produced the largest gain in student learning. Many of the projects that utilized these groupings appeared to target students with special needs or at risk students and offered programs designed to address specific learner needs. Many of the literacy projects used these strategies. Results from use of commercially developed computer programs to address student learning in the areas of math and reading made smaller gains.

ANALYSIS OF PROVINCIAL ACHIEVEMENT TESTS

Another way to explore the impact of the first two years of AISI implementation is to analyze changes in student achievement as measured by PATs. Given the widespread focus on literacy and numeracy, the English Language Arts and Mathematics tests may be particularly useful in analyzing the impact of participation in AISI projects.

For purposes of this analysis, AISI schools were identified separately from other schools. Schools included in the 'AISI' project focus met the following criteria.

- A public, separate, charter or Francophone school involved in an AISI project that started in 2000/2001.
- The AISI project focused on the subject area in question (i.e. language arts/literacy or mathematics/numeracy).
- The project included students in the appropriate grade level (i.e. grades 3, 6, or 9).
- The project expected quantitative results in the first and second years; (i.e. they have a baseline and 2000/2001 and 2001/2002 targets).
- More than five students from the school wrote the June 2001 and June 2002 provincial achievement tests.

Most of these schools also used the provincial achievement test results as a measure of student learning in their AISI project.

The provincial analysis included all public, separate, charter or Francophone schools. The AISI schools comprise part of this provincial group. This means the difference between AISI project achievement of PATs may be minimal, as their achievement results are also included in the provincial sample. It is likely that AISI projects contributed to the improvement in provincial results. Table 3.6 shows the number of schools and students used to generate the AISI data.

Table 3.6 Number of Schools and Students in the AISI Data

	Number of Schools	**Number of Students**	
Year		**2001**	**2002**
Mathematics 3	289	10,307	9,427
Mathematics 6	286	10,572	9,795
Mathematics 9	193	13,934	12,675
Language Arts 3	661	25,920	24,151
Language Arts 6	568	22,569	22,403
Language Arts 9	288	18,192	17,337

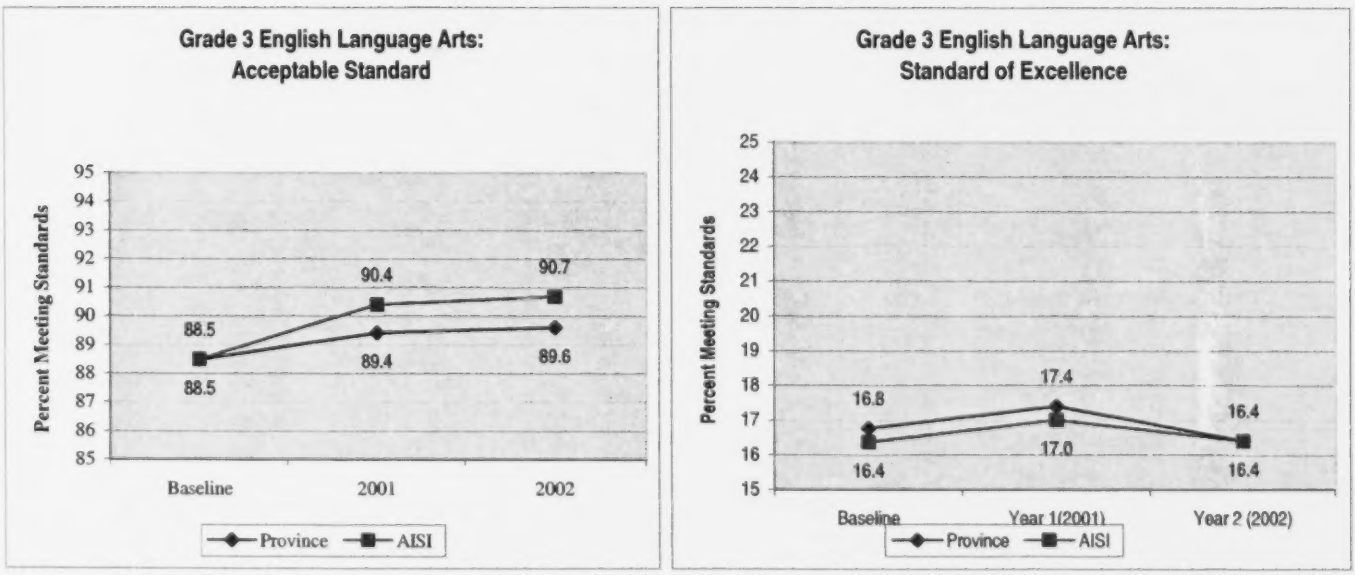
The series of graphs that follow show the changes in the provincial achievement test results for English language arts (Figure 3.17) and mathematics (Figure 3.18) in the first and second years of AISI compared to the baseline (previous three-year average) for AISI schools and for all schools in the province.

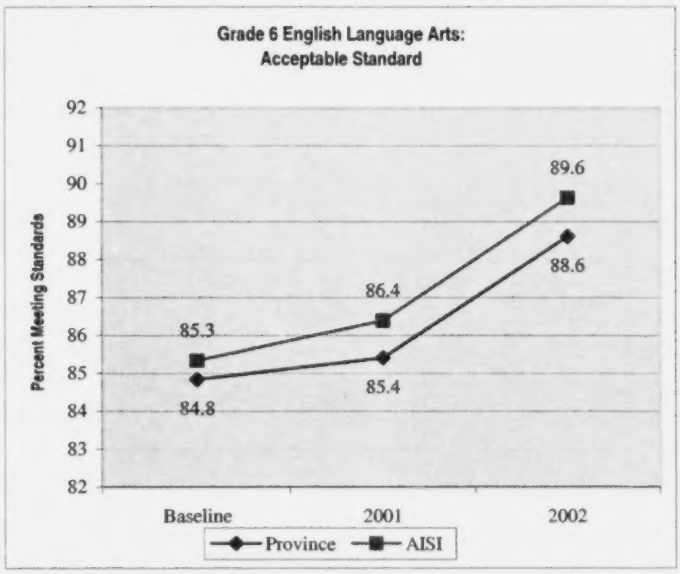
The use of a three-year average is generally a good practice, however, in this instance additional clarification may be necessary. Historically, student achievement has followed a trend with minimal fluctuations. Between 1998 and 2000, results rose significantly during the province's implementation of accountability practices such as standardized large-scale assessment, development of education plans and public reporting of education results.

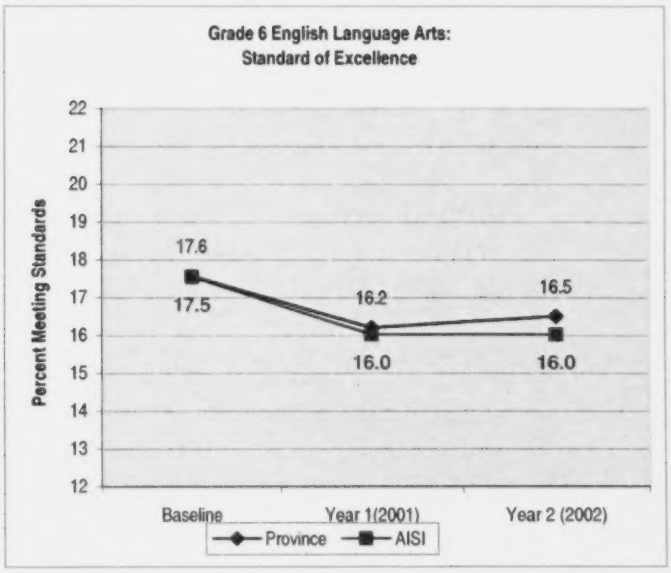
The results show a continued improvement in the percentage of students meeting the acceptable standard for all schools in both year one and year two in all English language Arts and mathematics at grades 3, 6 and 9 levels. The only anomaly is grade 9 mathematics, where results in year two decreased slightly for both AISI schools and the province. Overall, schools with AISI projects show a slightly higher improvement in the percentage of students meeting the acceptable standard when compared to the province in the first year. The gains by AISI schools over the province were maintained in the second year.

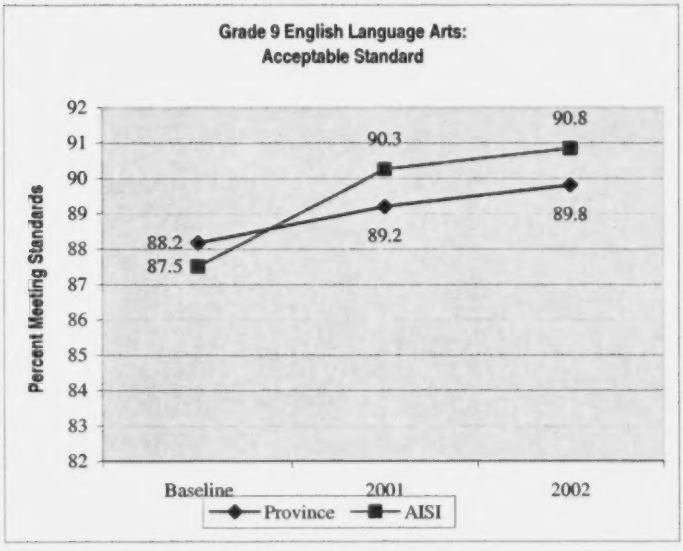
At the standard of excellence level however, improvement over provincial results was not generally noted during the first and second years of AISI. This is not unexpected since fewer AISI projects were designed to improve the percentage of students meeting the standard of excellence. It is interesting to note also that the standard of excellence results for grade 9 mathematics improved in the second year despite the decline in the acceptable standard results.

Figure 3.17 – A Comparison of Language Arts Provincial Achievement Test Results for AISI Schools and the Province




Grade 6 English Language Arts:
Acceptable Standard
Percent Meeting Standards
92
91
90
89
88
87
86
85
84
83
82
89.6
88.6
86.4
85.3
85.4
84.8
Baseline
2001
2002
Province
AISI


Grade 6 English Language Arts:
Standard of Excellence
Percent Meeting Standards
22
21
20
19
18
17
16
15
14
13
12
17.6
17.5
16.2
16.0
16.5
16.0
Baseline
Year 1(2001)
Year 2 (2002)
Province
AISI


Grade 9 English Language Arts:
Acceptable Standard
Percent Meeting Standards
92
91
90
89
88
87
86
85
84
83
82
90.8
90.3
89.8
89.2
88.2
87.5
Baseline
2001
2002
Province
AISI

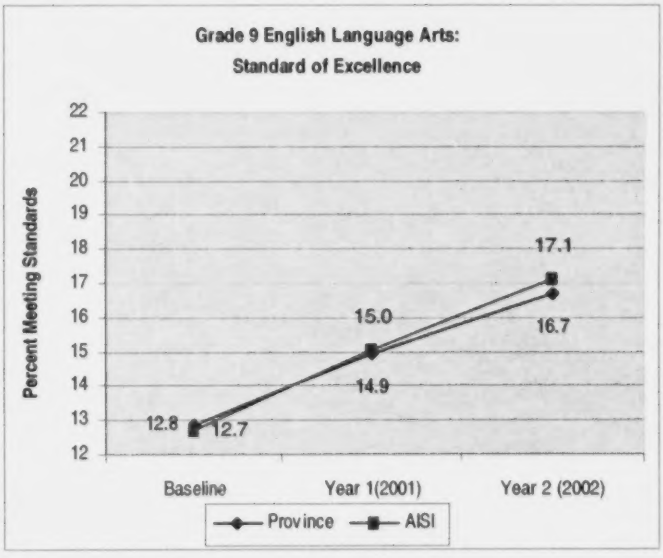
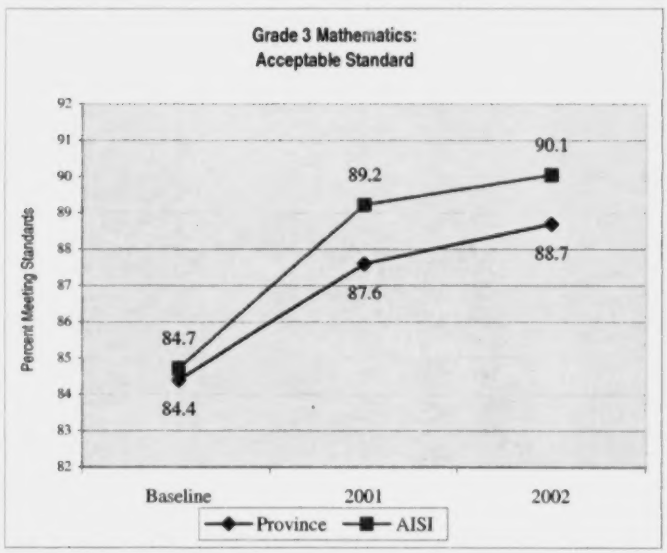
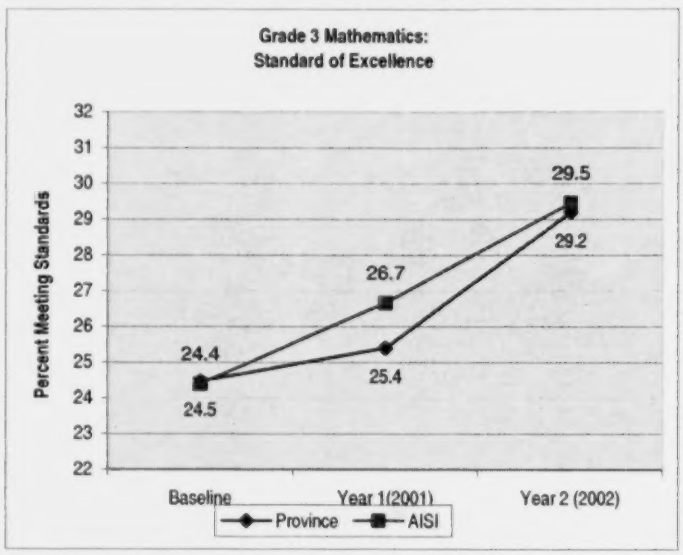
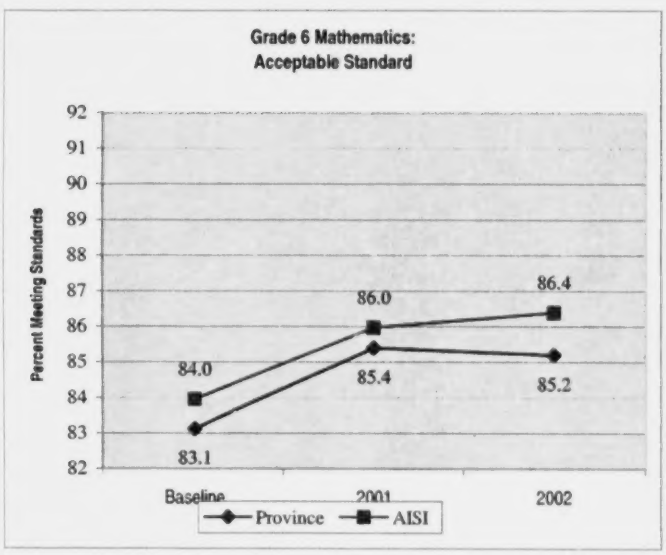
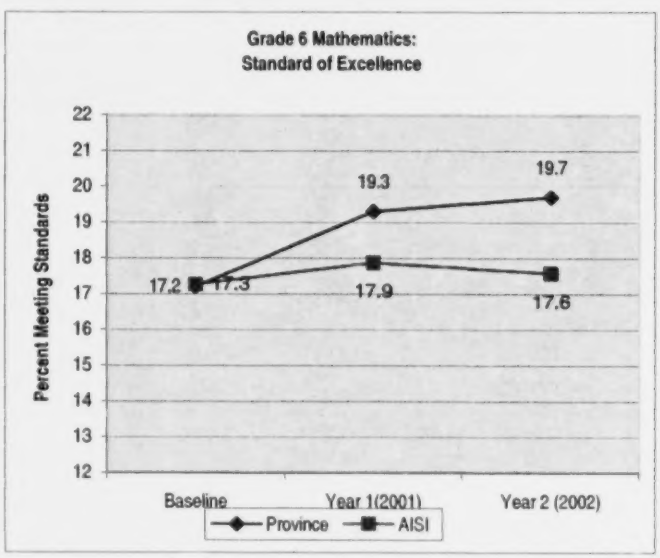

Grade 9 English Language Arts:
Standard of Excellence
Percent Meeting Standards
22
21
20
19
18
17
16
15
14
13
12
17.1
16.7
15.0
14.9
12.8
12.7
Baseline
Year 1(2001)
Year 2 (2002)
Province
AISI

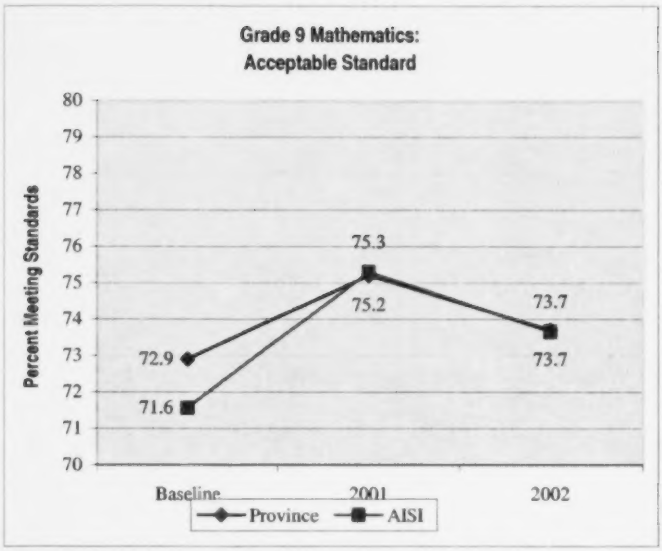
Figure 3.18 – A Comparison of Mathematics Provincial Achievement Test Results for AISI Schools and the Province

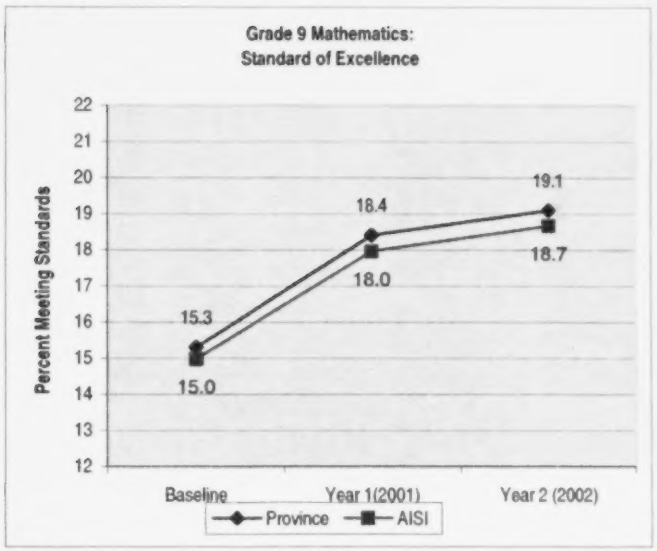










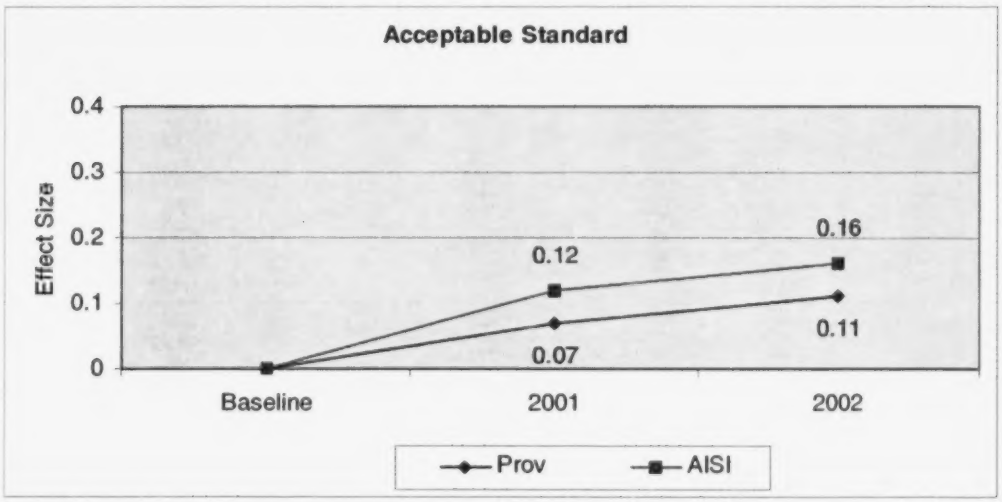


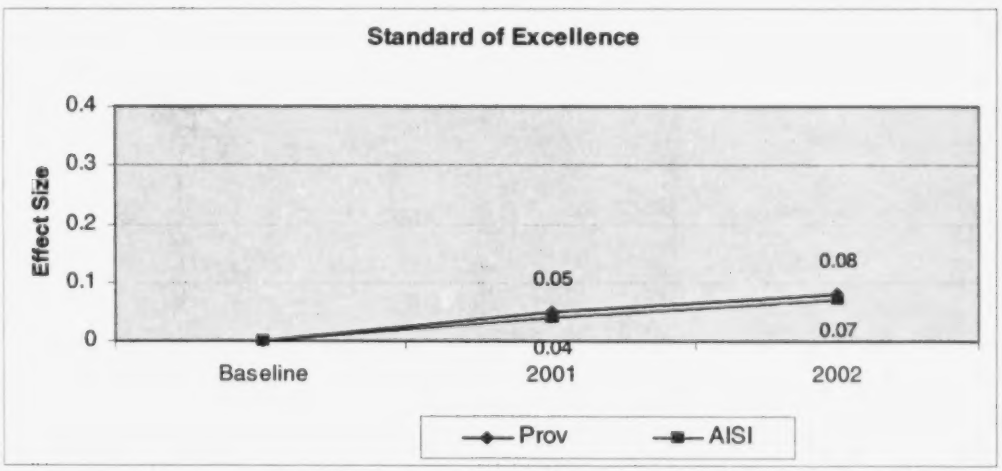
The slight decrease in both AISI schools and provincial grade 9 mathematics at the acceptable standard results at the acceptable standard is a province-wide phenomenon that is discussed in a K to 9 math report recently completed by Alberta Learning.

The combined results from English language arts and mathematics PATs for the selected AISI schools are consistent with the individual subject results. The *Acceptable Standard* comparison in Figure 3.19 shows that schools with AISI projects targeting mathematics and/or language arts appear to have shown a slightly greater improvement when compared to provincial PAT results. The *Standard of Excellence* comparison in Figure 3.19 does not demonstrate improvement over provincial results for AISI schools targeting these subjects. As few AISI projects used the standard of excellence as a measure, it is difficult to interpret these results.

The results for both the acceptable standard and the standard of excellence suggest that the gains made in the first year were maintained. The differences depicted in Figure 3.19 are not statistically significant.

Figure 3.19
Combined Effect Sizes of Provincial Achievement Test Results
(Grades 3, 6, & 9 LA and Math) of Selected AISI Schools
Compared to the Province





ANALYSIS OF EFFECTIVE PRACTICES FROM PROJECTS WITH MEDIUM AND LARGE EFFECT SIZES

Leadership and learning are indispensable to each other.

J.F. Kennedy

One hundred and fifty-five (155) projects that had medium and large two-year average effect sizes were reviewed and information sought regarding the project focus areas, grade levels, instructional strategies used, project management practices, professional development activities, active parent involvement and modes of communication to parents.

Project Focus Area

- Of the 155 projects reviewed, 21 (13%) projects focused on *early literacy* and 19 projects (12%) focused on *language arts*. Together these 40 projects (25%) utilized literacy programming and strategies to support students from kindergarten to grade 12. Reading and writing skills were the primary areas of concentration in of all these projects.
- There were 25 (16%) projects focused on integrating *technology* into the classroom through implementation of the information and communication technology (ICT) curriculum.
- The next major focus area was *special education* (7 projects or 5% of the sample) and assistance for at-risk students (13 projects or 8% of the sample). At-risk students were those considered academically disadvantaged but who were not coded according to Alberta Learning special education criteria.
- Sixteen (11%) projects placed attention on *learning variables* such as class size (6 projects), class configurations (1 project) and teaching practices (5 projects).
- Other curricular project focus areas included: 12 (7%) projects in mathematics; 7 (4%) projects in early intervention; 7 (4%) projects in French language programming; 5 (4%) projects in science.
- Six (4%) projects focused on *transitions*. Three of the transitions projects concentrated on high school completion; 5 (3%) projects focused on counselling services with 3 of the 5 of these projects focused on personal counselling.
- Another 3 (2%) projects were devoted to the *arts*.
- Two (1%) projects dealt with *assessment*.
- One project in each of the areas of *social/humanities* and health were included in the analysis.

Grade Levels

- Of the 155 projects reviewed, 21 (14%) projects focused exclusively on *one grade level*. These projects included 11 (7%) projects at the pre-kindergarten/kindergarten level, 6 (4%) projects at grade 10, two projects were exclusive to grade 1 and two projects were exclusive to grade 9. The other 134 (86%) projects were *multi-grade levels*.

Instructional Strategies

The 155 projects reviewed used one or more instructional strategies.

- Forty-two (27%) projects used *one-on-one and small group* pullout tutorials and intervention.
- Forty-three (27%) projects used *trained specialists* in coordinating, teaching, mentoring, and providing support for programs (these included technology coordinators, trained counsellors, speech-language pathologists, directors, field experts, consultants, and master teachers).
- Thirty-seven (23%) projects *used individualized and/or differentiated instruction* congruent with particular student needs. In many of these projects individualized program plans (IPP's) were established.
- *Technology* was integrated into classrooms and through the Information and Communication Technology learner outcomes in 35 (23%) of the projects.
- Thirty-two (20%) projects used specific *commercial programs* such as Marie Clay's Reading Recovery program, Math to the Max, The Learning Equation, and Science Alberta School Quest program.
- Twenty-seven (17%) projects collaboratively developed *units, lessons, resource packages* and assessment tools. Some of these projects made resources available to others both within and outside of the school jurisdiction.
- To incorporate smaller group instruction, 21 (13%) projects *lowered the pupil-teacher ratio* in the regular classroom setting. This strategy, when combined with changes to instructional practice as noted in these projects, improved student learning.
- Nineteen (12%) projects used *experiential* instructional strategies. Many of these projects ensured "hands-on" learning through the use of math manipulatives and science laboratories and fairs.
- Eighteen (11%) projects focused on integration of curriculum objectives across subjects through the use of *student-led projects*. The activities included problem-based and/or action-based research that encouraged higher level thinking skills. Many of these projects attempted to develop an inquiry-based approach to student projects that promote understanding of a wide variety of curricular concepts.
- Other instructional strategies included: *flexible grade groupings* in 9 (6%) projects and *student peer teaching* in 8 (5%) projects.
- Within the 11 projects focused exclusively on *pre-kindergarten/kindergarten* level, 6 (54%) of these projects *implemented a longer school day* for "at-risk" students.
- Within the projects that targeted junior/senior high students, 5 projects used *modified school days* and 4 projects ensured that one *teacher taught all core subjects* to a particular group of students.

Professional Development Activities:

Professional development activities were mentioned in many of the projects with some of the projects focusing on these activities as central to the teaching/learning process.

- A majority of the projects (i.e., 51 or 32% projects) made use of *school-based* in-services. These in-services were primarily in the specific project focus area that the school was targeting.
- Twenty-eight (18%) projects mentioned the use of *collaborative planning* and/or time allocated for this planning. Time allocated for planning appears to be a key component in determining the success of the improvement project.

- *Mentorship and/or coaching* were used in 22 (14%) projects and team teaching was incorporated into 15 (9%) projects.
- The use of *partnerships* and networking was apparent in 13 (8%) projects. Partnerships included post-secondary institutions, outside school jurisdictions, and other governmental departments.
- Eleven (7%) projects mentioned staff attending professional *conferences* and 10 (6%) projects indicated the use of *professional reading/research.*

Active Parent Involvement

Staff involved with the projects attempted to actively involve the parents in the projects. One project noted that the more involved the parents were in the project at school and the more information that was provided to them about the project, the more involved the parents became at home.

- Forty-one (26%) projects encouraged parents to provide *daily work at home* to their children. This involvement included daily reading, practice worksheets, and reviewing homework.
- Parents were encouraged to provide feedback to 35 (22%) projects through the use of a parent/satisfaction survey.
- *Parent volunteers* were invited to assist in the classrooms, school, and field experiences in 32 (20%) projects.
- Twenty-nine (18%) projects provided *in-service opportunities* for parents through school workshops, parent networking groups and "hands-on" training.
- Parents were involved in the *IPP development* process in 19 (12%) projects.
- Of the 155 projects reviewed, 19 (12%) projects used *parent consultation* to assist in decision-making and in 5 (3%) projects the school council provided *additional funding* for the projects.

Communication to Parents

Staff involved with the projects used a number of approaches to communicate to parents.

- Forty-five (28%) projects communicated through *school council meetings.*
- To communicate specific project results, 41 (26%) projects used *parent-teacher meetings* and updated *student progress reports.*
- *School newsletters* provided project information in 32 (20%) projects.
- As well, 31 (19%) projects communicated through the use of *special events* including public meetings, assemblies, classroom celebrations, project displays and presentations at key school events.
- Twenty-four (15%) projects indicated that staff had regular *personal contact* with parents. This contact included face-to-face communication, phone calls and e-mails. Other forms of communication included providing information packages and/or brochures in 7 (4%) projects, use of the school website in 6 (4%) projects and contact with the local media in 4 (2%) projects.

SUMMARY AND IMPLICATIONS

If you have built castles in the air, your work need not be lost; that is where they should be. Now put the foundations under them.

Henry David Thoreau

Summary

The second year of AISI was characterized by increased success and commitment to school improvement. This was evident in that student learning continued to improve during the second year of AISI implementation. Feedback from teachers, coordinators, parents and partners indicates the culture of school improvement was enthusiastically embraced as efforts to enhance student learning entered the second year of implementation. This final section provides a summary of results of implications and conclusions for the first two years of AISI implementation.

The first and second year AISI project results showed continuous improvement over baselines. Qualitative measures showed a higher percentage of improvement over baseline than did quantitative measures.

Almost all (92%) of the projects met targets in 2002. A higher percentage of targets were met for qualitative measures than for quantitative measures.

The results showed that AISI is continuing to have an impact on student learning. Seventy-two percent of the projects showed improvement over the baseline on all student learning measures and as high as 93% reported improvements on the majority of their student learning measures. Thirty-five percent of all projects had medium and large effect sizes (0.4+) on student learning and another 19% showed small effects on student learning.

The chart below shows the effect sizes of projects grouped by selected variables on student learning measures.

Year 2 Summary of AISI Project Results – Student Learning Measures

Effect Size	Student Population	Selected Subject Areas	Selected Themes/Focus	Instructional strategy/grouping
Medium (0.4 – 0.7)	Students with Special Needs, At-Risk Students	Early Literacy Science	Technology Integration (ICT), Early intervention, High School Completion	Individualized or Small Group Instruction
Small (0.2 – 0.3)	Regular, Gifted and Talented	Math	Transition to Secondary School, Small Class Size	Differentiated Instruction
Minimum (Less than 0.2)		Fine Arts		Computer Assisted Instruction

Projects that appeared to make the most impact on students are those that targeted students with special needs and students who are at risk. The least impact was shown for students who are gifted and talented and who are predominately achieving at high levels. It is noted that it would be difficult to continue to achieve large effect size impact with this particular group.

Results on selected projects with a specific curricular focus showed science and early literacy projects had the greatest impact on student learning. Projects with a fine arts focus did not result in significant gains in student learning measures during this period, however, the benefits of fine arts to brain development have been noted in research coming from the cognitive sciences and neurosciences. Dr. Robert Sylvester, in an article related to brain research and the importance of educational investment in the arts stated, "*Emotion and attention (which are central to all activity in the arts) often lead us to important rational behaviors that wouldn't have emerged if we hadn't walked through the arts-enhanced doorway. Emotion drives attention, and attention drives learning, problem solving, behavior, and just about everything else.*" Stronger gains from fine arts projects may be more evident in the future.

Other project themes and learning variables that showed greater impact on student learning were Individualized or Small Group Instruction, Technology Integration (ICT), Early Intervention, and High School Completion. Small class size project results are congruent with research indicating minimal improvement to student learning are found when class size is the only intervention.

Another way to explore the impact of the first and second year of AISI implementation is to analyze changes in student achievement as measured by PATs. Given the widespread focus on literacy and numeracy, the English Language Arts and mathematics tests may be used to analyze the impact of participation in such AISI projects. The results show an overall improvement in the percentage of students meeting acceptable standard for all schools in 2001 and 2002. Schools with AISI projects showed a greater improvement compared to all schools in the province, even though the provincial results include the gains achieved by the AISI school projects. The evidence indicates that the AISI projects may have contributed to improved student achievement at the acceptable standard level. The only anomaly is grade 9 mathematics, where the acceptable standard results in year two decreased slightly for both AISI schools and the province. The recently completed Alberta Learning study of K-9 math provides suggestions that may assist in improving secondary math achievement within the province. The results also suggest that AISI projects, fewer in number, did not improve the standard of excellence results for the province as a whole.

An analysis was completed for the 155 projects demonstrating medium and large effect sizes to identify effective practices. Appendix E lists the 155 projects analyzed. The main project focus areas were early literacy, language arts and technology. The majority were multi-grade levels projects. The most common instructional strategies were one-on-one or small group, trained specialists or technology integration. Professional development was a key component of project design and implementation. Project staff attempted to involve the parents in the projects.

Implications for Action

The results of two years of AISI implementation provide data that can be useful in developing new projects or modifying those already in place.

The effect size results from years 1 and 2 can be used to select, design, modify and review AISI projects. For example, school authorities can note the projects that were most successful (effect sizes of greater than 0.4) and consider developing projects in these areas. Project selection must be based on data gathered and organized to identify the areas of greatest need for improved student learning.

In addition to the information about project results already available, there is a need for more detailed information about promising practices, tools, products and teacher insights developed for use within these projects. Gathering and dissemination of this data will assist to further school improvement practices. In order to maximize the application of project findings to other situations, two-way communication is essential. The AISI Clearinghouse was recently launched and is being expanded to improve communication about AISI projects. Specific information about each AISI project can be found on the Clearinghouse. For example, lessons learned and promising practices about individual projects are part of the Clearinghouse data bank. The Clearinghouse will enable a broad sharing of student learning information among people located in Alberta and beyond.

Partner universities have a vital role in assisting schools with improvement projects. Selection and alignment of goals, strategies and measures is critical to project design and analysis of results. Additionally, support for school authorities that builds capacity to discern well-designed research studies from those whose design is questionable would benefit educators and parents in determining the research base for their projects. Organization of data and assistance to select the right measures and the right number of measures for individual projects is also critical to success of school improvement projects.

Building capacity is a shared responsibility. Increased capacity in government is needed to support and monitor implementation of school improvement projects, in school authorities to design, implement, and evaluate local projects and changes to professional practice, and within families and communities to actively participate in enhancing learner success. Continued leadership and commitment to the principles of AISI and to effective professional development to increase the knowledge, skills and attributes of those who serve Alberta students is critical to sustainability of school improvement. Learnings and improved practices need to be integrated into daily work so that improvements to teaching and learning become embedded within the school community. Exploration of effective practices to achieve these goals would support extension of AISI results beyond those students, staff and parents participating in individual projects.

Conclusion

AISI has produced improvements in student learning in its two years of operation. Results show that AISI has been a successful collaboration among government, partner organizations, and Alberta students, teachers, administrators, trustees, parents and community in developing and implementing projects that address local needs and circumstances. AISI has already been successful in facilitating school improvement through targeted funding. Measurement of qualitative and quantitative gains to student learning and performance in order to determine whether this primary goal has been met remains a focus at local and provincial levels. Professional development, project design, implementation and evaluation are key components of AISI projects.

Hope sees the invisible, feels the intangible and achieves the impossible.

Anonymous

Appendix A: Financial Information

Public, Separate, Francophone and Charter Authorities

The funding approvals to the Public, Separate, Francophone and Charter Authorities for 2001-2002 were as follows:

	No. of Boards or Charters	AISI Funding 2001-2002
Public	42	$49,249,945
Separate	17	$14,863,157
Francophone	5	$427,095
Charter	10	$267,600
Totals	74	$64,807,797

Expenditures on AISI staffing and benefits, which includes teachers, teacher assistants, contract staff, substitute costs and release time represented over 84% (previous year 81%) of total AISI expenditures and over 1,000 FTEs. Supplies and equipment represented about 12% (previous year 16%) and other expenses about 4% (previous year 3%) of total AISI expenditures respectively.

Of the total expenses, 17.8% (previous year 17.0%) was expended on professional development (substitute cost, release time, outside instructors, supplies and equipment) and 4.1% (previous year 5.0%) on administrative support.

Private Schools and Private Early Childhood Services (ECS) Operators

The funding approvals to Private Schools and Private ECS Operators for 2001/2002 were as follows:

	No. of Schools or Operators	AISI Funding 2001/2002
Private Schools	115	$1,738,335
Private ECS Operators	116	$165,920
Totals	231	$1,904,255

Expenditures on AISI staffing and benefits, which include teachers, teacher assistants, contract staff, substitute costs and release time represented almost 55% (previous year 50%) of total AISI expenditures and almost 30 FTE's. Supplies and equipment represented about 42% (previous year 49%) and other expenses about 3% previous year 1%) of total AISI expenditures respectively.

Of the total expenses, 16.4% (previous year 2.0%) was expended on professional development (substitute cost, release time, outside instructors, supplies and equipment) and 4.3% (previous year 0.3%) on administrative support, in addition to the support provided by the Association of Independent Schools and Colleges in Alberta (AISCA).

Appendix B: Calculating Effect Sizes[1]

Effect sizes for continuous data

In the analysis of research that compares treatments, effect sizes are often calculated in the following way:

$$\Delta = \frac{\overline{X}_T - \overline{X}_C}{s_C} \quad (1)$$

where $\overline{X}_T$ is the mean of the treatment group, $\overline{X}_C$ is the comparison group, and s_C is the standard deviation of the comparison group. The summary statistic, Δ expresses the difference in standard deviation units. This transformation allows us to compare the effects of treatments when the assessments have been carried out using different instruments. In the present circumstance, if the baselines and targets were stated as means, and if the jurisdictions provided means and standard deviations for the observed performance (the 'actual' values), then it would be possible to express results in terms of effect sizes:

$$\Delta_A = \frac{\overline{X}_A - \overline{X}_B}{s_B} \qquad (2)$$

where $\overline{X}_A$ is the actual mean attained, $\overline{X}_B$ is the mean at baseline, and s_B is the standard deviation at baseline, and Δ_A is the effect size of the treatment relative to the baseline condition. Knowing the means and standard deviations for each of the numerical indicators would make it possible to express progress in terms of effect sizes.

Effect sizes for proportions

The calculation of effect sizes using proportions is somewhat more complex than the calculation using means. It is possible to treat proportions simply as the average score in dichotomous data, and the resulting effect size would be:

$$\Delta_T = \frac{p_T - p_C}{\sqrt{p_C(1-p_C)}} \quad (5)$$

Expression (5) is the same as expression (1) except the original scores have only two values, 1, or 0. The denominator is the standard deviation of dichotomous variables, and p_C and p_T are the proportions of people in the comparison and treatment groups who receive a score of 1 (i.e. achieve a certain standard, subscribe to a particular opinion, etc.)

[1] Excerpts from a paper prepared by Thomas Maguire on the framework for evaluating AISI, March 22, 2001.

The problem with expression (5) is that it does not behave very well when the proportions are near one or zero. Although the standard deviation gets smaller as you approach the boundary values of 1 and 0, it is almost impossible to attain a reasonable effect size when the comparison proportion is high to begin with, and it is very easy to declare a small difference in proportions important when the comparison value is near zero.

To get around this problem Glass, McGaw and Smith (1981) suggest that the proportions be transformed to probits, logits or some other reasonable function. To clarify their recommendation, consider the case of a jurisdiction that has 60% of its students achieving an Acceptable level on the grade 6 achievement test in mathematics, they set their target at 65%, and later they find that 68% of their students actually meet the target. Glass et al reason that you could consider that students are arrayed along the achievement continuum. The Acceptable standard is a point on the continuum, above which 60% of the students fall at baseline time (the cutting score). The metric of the continuum is fixed by Alberta Learning when the tests are created and the means and standard deviations are calculated, but without loss in meaning, we can treat the continuum as being on a scale with a mean of zero and a standard deviation of one. If the underlying distribution of scores can be approximated by a normal distribution, then the distance of the cutting score from the mean at baseline can be determined by finding **the unit normal deviate that corresponds to the proportion, 60%.** This value is +. 25. Converting the actual value of 68% yields a value of approximately 0.47.

The difference between the baseline and the actual is .47 - .25 = **.22 standard deviations**. In other words, this hypothetical jurisdiction achieved an effect of almost one quarter of a standard deviation (.22).

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Appendix C: Effect Sizes Transformed into Percentiles

The table below shows conversions of effect sizes to percentile ranks and percentile gains if we assume that the data is normally distributed. **A percentile rank** is the proportion of scores in a distribution that a specific score is greater than or equal to. For instance, if you received a score of 95 on a math test and this score was greater than or equal to the scores of 88% of the students taking the test, then your percentile rank would be 88. You would be in the 88th percentile. **A percentile gain** is the difference between the percentile rank of an average person who received an intervention compared that of an average person in the control group. For example an effect size of 0.4 means that an average person who received the program moved 16 percentile points higher than they would be if they did not receive the program.

Effect Size	Percentile Rank	Percentile Gain
0.01	50.4	0.4
0.05	52.0	2.0
0.10	54.0	4.0
0.15	56.0	6.0
0.20	57.9	7.9
0.25	59.9	9.9
0.30	61.8	11.8
0.35	63.7	13.7
0.40	65.5	15.5
0.45	67.4	17.4
0.50	69.1	19.1
0.55	70.9	20.9
0.60	72.6	22.6
0.65	74.2	24.2
0.70	75.8	25.8
0.75	77.3	27.3
0.80	78.8	28.8
0.85	80.2	30.2
0.90	81.6	31.6
0.95	82.9	32.9
1.00	84.1	34.1
1.10	86.4	36.4
1.20	88.5	38.5
1.50	93.3	43.3
1.80	96.4	46.4
2.00	97.7	47.7
2.50	99.4	49.4
3.00	99.9	49.9
3.50	100.0	50.0

Appendix D: Projects Sorted by Student Populations, Themes, Learning Variables and Measures

Table 2.1 AISI Projects by Targeted Students

Targeted Students	Number of Projects	% of Projects*
Aboriginal	47	**6.5**
At-Risk	165	**23.0**
English as a Second Language (ESL)	72	**10.0**
Francophone	10	**1.4**
Gifted/Talented	96	**13.4**
Hutterite	9	**1.3**
Regular	473	**65.9**
Special Needs	222	**30.9**
Other	11	**1.5**
All Students	91	**12.7**

Note. Percentages do not total to 100 because projects could include more than one theme.
*% is based on 718 approved projects in year 2

Table 2.2: AISI Projects by Theme

Themes	Number of Projects	% of Projects*
Assessment	43	**6.0**
Behaviour Improvement	43	**6.0**
Early Intervention	81	**11.3**
ECS Readiness	69	**9.6**
High School Completion	25	**3.5**
Meta-Cognition (Brain Gym, Thinking about Thinking)	5	**0.7**
Multiple Intelligences	26	**3.6**
Parent/Community	80	**11.1**
Professional Development	222	**30.9**
Resources (equipment, books library, upgrade)	218	**30.4**
Retention	21	**2.9**
School Climate	61	**8.5**
Student Services	35	**4.9**
Technology	124	**17.3**
Transition Programs	25	**3.5**
Wellness (including drug awareness)	9	**1.3**
Other (including hiring various specialists, sound field systems, 7 Habits)	32	**4.5**

Note. Percentages do not total to 100 because projects could include more than one theme.
*% is based on 718 approved projects in year 2

Table 2.3: AISI Projects by Curricular Area

Subject Area	Number of Projects	% of Projects*
Career and Technology Studies	13	1.8
Core (LA, SS, Ma, Sc)	52	7.2
Fine Arts	28	3.9
French – Immersion	11	1.5
French – Second Language	5	0.7
French – Francophone	7	1.0
Integrated Occupational Program (IOP)	5	0.7
Language Arts/Literacy	253	35.2
Life Skills (CALM)/Health	13	1.8
Mathematics/Numeracy	112	15.6
Physical Education	19	2.6
Registered Apprenticeship Program (RAP)	2	0.3
Science	28	3.9
Second Languages (Other than French)	8	1.1
Social Studies	16	2.2
Work Experience	4	0.6
Other	7	1.0

Note. Percentages do not total to 100 because projects could include more than one theme.
*% is based on 718 approved projects in year 2

Table 2.4: AISI Projects by Division/Grade

Division/Grade	Number of Projects	% of Projects*
Pre K	84	11.7
Pre K-3	512	71.3
4-6	387	53.9
7-9	361	50.3
10-12	255	35.5

Note. Percentages do not total to 100 because projects could include more than one theme.
*% is based on 718 approved projects in year 2

Table 2.5: Learning Variables

Learning Variables	Number of Projects	% of Projects*
Alternative Delivery	15	2.1
Animated Literacy	8	1.1
Balanced Literacy	19	2.6
Computer-Assisted Instruction (including auto skills)	34	4.7
Differentiated Instruction	32	4.5
Enrichment	33	4.6
Full Day Kindergarten	5	0.7
Guest Speakers	14	1.9
Guided Reading/Blended Structure	6	0.8
Hands-on Experiences (Experiential Learning)	50	7.0
Inclusive Education	9	1.3
Increasing instructional time on core subjects	2	0.3
Independent Learning	12	1.7
Individual Programming	57	7.9
Mentoring	15	2.1
Multi-Grading	15	2.1
Other (including outreach, daily intensive reading instruction)	35	4.9
Paraprofessionals	40	5.6
Problem Solving	26	3.6
Projects	34	4.7
Resource Room (including pull out programs)	24	3.3
Small Class Size	28	3.9
Small Groups	82	11.4
Teaching to Accommodate Learning Styles	44	6.1
Team Approach	27	3.8
Tutoring	28	3.9
Workshops	15	2.1

Note. Percentages do not total to 100 because projects could include more than one theme.
*% is based on 718 approved projects in year 2

Table 2.6: Types of Measures

Type of Measures	Number of Projects	% of Projects*
Description of Quality Measures	474	**66.0**
Final Teacher Awarded Marks	64	**8.9**
Locally Developed/Teacher Made Tests	115	**16.0**
Measures Based on CAMP Materials	14	**1.9**
Observation/Checklists	105	**14.6**
Participation Rates in Provincial Achievement Tests/Diploma Exams	19	**2.6**
Provincial Achievement Tests	298	**41.5**
Provincial Diploma Examinations	54	**7.5**
School Records	115	**16.0**
School Completion/Graduation Measures	15	**2.1**
Standardized Tests	179	**24.9**
Surveys	447	**62.3**
Other Program Participation Measures	97	**13.5**

Note. Percentages do not total to 100 because projects could use multiple measures.
*% is based on 718 approved projects in year 2

Appendix E: Analysis of Year Two Effective Practices

Focus Areas of Year Two Projects Selected Based on Medium and Large Effect Sizes

Project Focus Area	# of Projects
Language Arts	19
Early Literacy	21
Early Intervention	7
Mathematics	12
Science	5
Social/Humanities	1
Arts	3
Physical Education	0
Health	1
French Language	7
Technology/ICT	25
Aboriginal Studies (FNMI)	0
Special Education	8
At-risk Students	13
Counselling	5
Transitions	6
Assessment	2
Learning Variables	4
Class Size	5
Class Configuration	2
Teaching Practices	5
Miscellaneous	4

Sample of Year Two Projects with Medium to Large Effect Sizes

Project #	Project Focus Area	Grade Levels	Instructional Strategies	Professional Development	Active Parent Involvement in Projects	Communication to Parents
112	Language Arts	1 to 9	1:1 and small group pull-out Reading Recovery Program extension of early literacy. Tape-record student's oral reading. Students learn to read by reading and composing own messages.	Ongoing PD focusing on literacy.	Reading at home. The more involved parents were at school and better informed they were, the more involved parents became at home.	Phone calls, notes, writing in daily agendas. Parent interviews regarding child's reading level and program offered.
115	Language Arts	7 to 12	Daily 20 minute silent/pleasure reading. Silent reading paired with audiotape. Coached reading with a tutor. Autoskills program and Academy of Reading program.		Parent volunteers listen to students reading. Practice reading with child at home. Need for parent reading program for those who lack the skills to assist students at home.	
235	Language Arts	K to 8	Writing classroom support by teacher and TA along with small group instruction when needed. Sharing and use of promising writing practices.	PD for teachers to align assessment of writing with province standards, analysis of writing samples, and 3 PD days.	Participation in homework strategy.	Parent-teacher interviews. Ongoing consultation.
242	Language Arts	1 to 2	Reading Recovery program within small group settings for at-risk students provided by Reading Recovery teacher.	Reading Recovery lead teachers train other teachers (8) twice a week. Modeling and demonstrations used in training.	Read with their child nightly. Parent consultation throughout the project.	Reports to the school council.
303	Language Arts	1 to 6	Remedial type program based on balanced instructional strategies taken from both the phonemic analysis and "whole" language models. 1:1 and small group pull-out Language Arts instruction. Programs developed from a "Resource Library of Strategies".	Program administrator serves as resource person for school staff members and parents. Leveled Library created.		Daily communication books, phone calls and "Smile-o-grams".

Note: Blank boxes on the chart do not mean those components were not part of the project, only that they were not included in the "G" section of the APAR.

Project #	Project Focus Area	Grade Levels	Instructional Strategies	Professional Development	Active Parent Involvement in Projects	Communication to Parents
346	Language Arts	4 to 9	In-class remediation support, 1:1 and small group pull-out using the Reading Recovery Model for intervention. Use of "Style & Structure in Writing" method. Accelerated Reading Program to challenge reading comprehension.	"The First Steps" program used for tutoring/mentoring new teachers. Teacher collaboration and team teaching. Blocked time allocated to PD. Prepared packages for use by teachers and parents. Purchased leveled books.	Reading at home with child which parents sign off. Participated in Individualized Program Plan development. Volunteered as readers.	School council meetings, newsletters, phone calls, parent-teacher conferences.
353	Language Arts	7 to 9	Reader's Theatre for 15 minutes per day for 6 weeks for all junior high students.	PD focus on strategies in teaching teens to read. One FTE staff member available to project. Substitute arrangements made to allow PD to take place. Quality instruction time and resources.	Audience for Reader's Theatre and Speech Arts Festival. Setting aside time to read, taking their child to the library, reading with their child and verifying reading was taking place.	Phone calls, letters, attend conferences with our AISI teachers, progress reports, parent-teacher interviews.
392	Language Arts	3 to 8	Small group intervention to develop literacy. Literature circles and "Visualizing & Verbalizing for Reading Comprehension. Accelerated reading novels.	In-service opportunities for "Visualizing & Verbalizing for Reading Comprehension" and literacy strategies.	Involvement in development of Individualized Program Plan. Involvement in PD opportunities.	School council meetings, newsletters, assemblies and special events.
459	Language Arts	K to 12	Balanced Literacy Program in French. Graphic organizers and semantic mapping. Reciprocal teaching.	Fully qualified 1.0 FTE Literacy Coordinator. Demonstrations and coaching lessons.	Involved in program set-up, encouraged to attend classes, completed parent survey.	In-serviced how to use reading prompts taught in classroom at home.
499	Language Arts	K to 6	Use of Accelerated Reading and Guided reading program. Free reading in student's leisure time. Mentored and paired reading.	PD in early reading intervention and guided reading. Purchased leveled readers.	Parent volunteers, home reading, completed parent survey.	

Note: Blank boxes on the chart do not mean those components were not part of the project, only that they were not included in the "G" section of the APAR.

Project #	Project Focus Area	Grade Levels	Instructional Strategies	Professional Development	Active Parent Involvement in Projects	Communication to Parents
536	Language Arts	5 to 6	Learning strategies instruction in small group setting. Tutorial instruction in core subjects within small group setting. Math resource room with small group instruction and remediation.	Staff to complete timetabling, assessment and instruction.	School council involved in original development of project. Parent consent.	Teacher has ongoing contact with parents.
581	Language Arts	7 to 12	School-wide implementation of the Accelerated Reader computer program. Provide classes units and modules to increase the comprehensive reading skills and creative thinking skills. Implemented rewards for reading.	Four PD days to train teachers how to teach reading in all content areas. Lead teachers teach modules in classroom as examples for other teachers. Expansion of resources especially high interest/low vocabulary books for those reluctant readers.	Parents assist child with reading homework.	Newsletter, local newspaper, parent reports detailing child's diagnostic test results sent home twice/year, student record reports sent home 3 times per year, parent council meetings and staff contact.
615	Language Arts	1 to 9	Remedial reading program using the "Action Phonics" program. 1:1 and small group assistance by teacher trained in "Action Phonics".	Assessment, record keeping, and timetabling.	Workshop and information session.	Parent informed when child completes a level within the program.
659	Language Arts	6 to 9	Intensive reading/writing instruction through multi-dimensional approach advocated by leading scholars. Writing skills a major focus of the program. Conscious of teaching towards literacy in all subject areas.	Regularly scheduled half days to work towards mastery in implementing the program. Extensive staff development (about 15 days per year) by leading experts and a cadre of trained teachers. Upgrade library resources.	Parents involved through student's Individualized Program Plan.	

Note: Blank boxes on the chart do not mean those components were not part of the project, only that they were not included in the "G" section of the APAR.

Project #	Project Focus Area	Grade Levels	Instructional Strategies	Professional Development	Active Parent Involvement in Projects	Communication to Parents
696	Language Arts	1 to 12	Publication of a weekly newsletter to inform students, staff and school families of school activities. Instruct students in how to write in various types of feature forms. Students given experience in photojournalism and interviewing techniques.	Journalist provides in-service training for classroom teachers.		
791	Language Arts	3 to 6	Mentorship re: Balanced Literacy. Coaching teachers to develop: guided reading, read aloud, reading responses, authors' notebooks, student picture book creating, the writer's cycle and Talk/Read/ Understand. Leveled reading books.	Networking groups including literature study groups, idea fairs, collegial support groups and development of activities and assessment instruments. Workshops, 1:1 mentorship, development and distribution of resources.	Parent volunteers.	School newsletters.
799	Language Arts	1 to 6	Determine need and build capacity by providing literacy strategies and support , new resources and philosophies.	Literacy Support Team (3 teachers) works directly with teachers, planning, team-teaching, and assessing to help enhance classroom practice and improve student learning. Mentorship and coaching of teachers over a 6 week period.	Participation in home reading programs, participation in literacy night and literacy workshop.	Council meetings, school newsletters, and parent workshops.

Note: Blank boxes on the chart do not mean those components were not part of the project, only that they were not included in the "G" section of the APAR.

Project #	Project Focus Area	Grade Levels	Instructional Strategies	Professional Development	Active Parent Involvement in Projects	Communication to Parents
801	Language Arts	K to 12	Short-term small group intervention using proven teaching strategies. Model effective use of appropriate software and technology literacy learning resources.	School based in-services, area wide PD, team teaching and collaboration. Literacy enhancement team builds capacity within staff to meet the total literacy needs of diverse learners through mentoring, coaching and collaborative lesson planning.	Parents completed survey, supported their child with literacy activities at home, participated in literacy workshops.	School newsletters, parent-teacher conferences, School Quality Reviews, and classroom celebrations of projects.
895	Language Arts	3 to 12	Improve writing through teaching skills in a variety of prose forms using "Blended Structure and Style Writing Program." Guided practice in writer's workshop.	Three teachers, administrator and a speech-language pathologist survey best practices from staff. Two-day workshop re: the "Blended Structure and Style Writing Program".		Results reviewed with parent association.
122	Early Literacy	K to 2	Speech-language pathologist provides speech and language strategies. 1:1 and small group pull-out assistance with early literacy skills. Cross grade reading tutors and dedicated daily practice time for independent readers.			
207	Early Literacy	1	Intensive reading/writing instruction .hrough a multi-dimensional approach advocated by leading scholars.	Teachers studied research-based practice, implemented it with their students and studied the impact on students. PD included information sharing and ongoing staff development sessions.	Parents completed survey. Provided with strategies to support children at home.	Parent meetings.

Note: Blank boxes on the chart do not mean those components were not part of the project, only that they were not included in the "G" section of the APAR.

Project #	Project Focus Area	Grade Levels	Instructional Strategies	Professional Development	Active Parent Involvement in Projects	Communication to Parents
209	Early Literacy	K to 3	Teach students to use library and reference skills. Literature appreciation activities. Purchase of good quality fiction and reference books for English as Second Language students to incorporate into a traveling library.	PD provided for assistants and teachers to address early literacy strategies.	Parents are encouraged to borrow books from the collection to read aloud and discuss with their children.	
226	Early Literacy	K to 3	Daily literacy and numeracy intervention in Early Childhood Services setting to students "at-risk". Student portfolios.	Collaborative discussion and reflection. Integrated the services of multiple agencies. PD focused on English as Second Language and early intervention strategies.	Provided informed consent. Participated in conferences to develop goals, strategies, and program outcomes.	Planned parent-teacher consultation time.
227	Early Literacy	K to 3	Low teacher-pupil ratio with daily intensive sessions on early literacy skills. "Reading for Success" program. Implementation of Modified Reading Recovery.	Comprehensive PD in early literacy development.	Reading at home with children. Participation in parent-teacher Interviews.	Consent forms, newsletters, parent meetings, and interviews.
268	Early Literacy	1 to 6	Administer diagnostic testing to determine appropriate intervention strategies and design suitable program for each student. 1:1 and small group assistance. Shared/paired reading school wide.	Staff sought additional assessment tools. PD in early literacy activities.	Parents completed survey and were provided with strategies to support children at home.	
345	Early Literacy	1 to 3	Small class sizes with instructional strategies. Modified "in classroom" remediation process. 1:1 and small group pull-out assistance using "The First Steps" program.	"The First Steps" program used to tutor/mentor new teachers, quarterly school team meetings and divisional PD sessions. Blocked time allocated to PD. Purchased leveled	Reading at home with child, participated in Individualized Program Plans development, assisted as volunteer readers.	School council meetings, newsletters, phone calls, parent-teacher conferences.

Note: Blank boxes on the chart do not mean those components were not part of the project, only that they were not included in the "G" section of the APAR.

Project #	Project Focus Area	Grade Levels	Instructional Strategies	Professional Development	Active Parent Involvement in Projects	Communication to Parents
				books.		
403	Early Literacy	K to 9	1:1 and small group pull-out literacy assistance. Use of Guided Reading & Auto-Skills Reading Programs.	PD for Language Arts teachers in Structured Style in Writing" program. Hired an AISI literacy specialist to coordinate new initiatives and in-service lead teachers in new programs.	Student resources made available for parent use at home.	School council meetings, annual open house, results communicated in annual education reports.
449	Early Literacy	K to 3	Teachers deliver the eight components of a Balanced Literacy Program. Uninterrupted Balanced Literacy block of reading and writing, teaching and learning implemented. Flexible grade groupings for guided reading lessons.	In-servicing, focus groups, action research, team teaching partners explored balanced literacy instruction, in-class coaching, purchasing student resources including leveled books and creating a professional library.		Newsletter, parent nights. Report cards reflect the key learning's of Balanced Literacy.
488	Early Literacy	1 to 2	Computer Assisted Instruction used to teach early literacy. Each student works on "Wiggleworks" for twenty minutes every second day during regular Language Arts time. 1:1 and small group individualized instruction provided.	Educational assistant facilitates the pilot on a daily basis, supervises students, helps troubleshoot and maintain records.	Parents completed satisfaction survey.	

Note: Blank boxes on the chart do not mean those components were not part of the project, only that they were not included in the "G" section of the APAR.

Project #	Project Focus Area	Grade Levels	Instructional Strategies	Professional Development	Active Parent Involvement in Projects	Communication to Parents
509	Early Literacy	K to 2	1:1 and small group pull-out literacy assistance. Daily opportunities for engaging in writing. Individualized Program Plans developed for each student in literacy program.	Trained teacher assistant. Little Celebration Series" did not work as well as "PM Reading Series".	Daily home activities.	Personal school agendas.
515	Early Literacy	K	Teachers provide 1:1 and small group programming in literacy instruction during the later part of school year for at-risk Kindergarten students. Address specific pre-reading skills in Kindergarten while maintaining a "learning through play" orientation.	Intensive PD at district level reinforced by in-class teacher demonstrations and model lessons at each school site. Staff developed and implemented a French version of the District Screening Tool to meet the needs of French Immersion students.	Parent consent, home reading component and parent in-services.	
517	Early Literacy	K to 2	Marie Clay's Reading Recovery program. 1:1 pull-out literacy intervention.	Monthly Literacy Team meetings. AISI coordinator documents, monitors and provides ongoing early literacy PD. Teachers requested Early intervention training. Parents requested in-servicing to better understand program.	Reading at home and parent satisfaction survey.	School council and newsletter.
519	Early Literacy	1 to 2	Early short-term intense 1:1 intervention program designed to provide assistance to at-risk readers. Program derived from Marie Clay's Reading Recovery Program.	Ongoing training in early reading intervention programs. Develop solid "in-house" expertise and a cadre of reading intervention teachers .	Home reading component, parent survey, parents invited to observe lessons in school.	

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Project #	Project Focus Area	Grade Levels	Instructional Strategies	Professional Development	Active Parent Involvement in Projects	Communication to Parents
546	Early Literacy	K to 3	Provided a preschool program on school site incorporating "Headstart" strategies for "at-risk" students. Deliver a Speech-Language program to students with language delays and speech disabilities.	Worked with Health Services to train speech assistant. Attended conferences and in-services were offered at school.		
739	Early Literacy	1 to 9	Balanced literacy approach using leveled books. Extra time and small group intervention for struggling students. Lead teacher supporting, modeling and mentoring within classrooms.	PD workshops and classroom support. "New Teacher" workshops.	Attendance at family literacy nights and home reading.	Newsletter and parent teacher communication.
740	Early Literacy	K	Implement the Animated Literacy Program to enhance learning to read skills in the Kindergarten program.	Professional development workshop for the teacher to implement the program. Purchase Animated Literacy supplies.		
838	Early Literacy	K to 2	Use of Beacon Literacy Program: Leading to Learning multi-sensory learning program designed to improve basic skills in the areas of reading, spelling, listening and auditory memory.	Purchase program materials (which include professional development component for teachers). In-service training in the Beacon Literacy program.	Parent workshop, satisfaction survey.	
844	Early Literacy	K	Use of Jolly Phonics program in the Kindergarten classroom.	Teachers in-serviced on the Jolly Phonics program.	Parents of all children in the class participated in weekly take home sheets.	

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853	Early Literacy	K	Implement the Animated Literacy Program to enhance reading and readiness skills in the Kindergarten program. Children's journals document their growth in learning to recognize and write letters and relating them to their sounds		The parent ECS executive, together with the teacher, establish the strategies and allocation of resources.	Monthly progress reports.
5087	Early Literacy	K to 3	Balanced Literacy strategies such as word wall and use of individual dictionaries. Exposure to varied writing genres. Use of leveled books during formal guided reading times.	Nine half-day in-services in Balanced Literacy. Demonstration by the facilitator in each classroom. Coachings as the teacher instructs class. Lead teacher will train, demonstrate, coach and support classroom teachers.	Assisting children with reviewing of word wall words and with the home reading program. Parent in-service where they were invited to become more actively involved and asked for their input.	Discussions at parent-teacher conferences and letters home.
204	Early Intervention	K	Full-day instruction for Kindergarten students. Half of each day devoted to literacy through an intensive reading/writing instruction based on the multi-dimensional approach advocated by leading recognized scholars.	Staff development on a monthly basis.	Parent volunteers in classroom, parent training sessions, parent survey.	Public meetings held and newsletter.
213	Early Intervention	K	Provided teacher assistant time to Kindergarten classes with high enrollment or high number of ESL students. 1:1 tutoring and small group intervention.	Teachers attended Early Childhood Conference. Learning resources ordered.		Local newspapers. AISI reports provided to all schools.

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419	Early Intervention	K	Comprehensive early education program with .5 FTE teacher with special needs background for intensive teaching to "at-risk" students. Low pupil/teacher ratio. Immersion in literature, language, fine motor skills and social skills in an integrated approach.	Coordinated program with Kindergarten programs. In-service staff on effective Early Education Enhancement Project implementation.	Classroom volunteers. Taught parents how to improve readiness of their children.	Parent-teacher interviews and ongoing consultation.
579	Early Intervention	K	Institute 2 half-day pre-Kindergarten programs that integrated basic concepts throughout the school year. Speech-language services provided. Gross motor skills emphasized through extra time in physical education.	Home visitations by teacher.	Monthly parent seminars and workshops, parent support group, classroom volunteer, parent survey.	School council meetings and AISI steering committee meetings.
613	Early Intervention	K to 3	Early intervention for reading, writing, spelling and Math provided by 0.25 FTE teacher and 1 FTE teacher assistant. Small group support, individual support within classrooms and 1:1 pull-out intervention to review skills taught by teacher.			Notification of screening and informed of results.
711	Early Intervention	K	Preschool program for at-risk students. Speech and language intervention. Focus on language and social skills development.	Identification, assessment, liaison with agencies, resource acquisition and collation of surveys.	Reading with children.	Parent-teacher interviews and ongoing communication.

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727	Early Intervention	K	Provided an extended day to the Kindergarten program for "at-risk" children. Community-based experiences, literature rich learning environment and engaging in research-based developmentally appropriate practices for young children.	Linking to and integrating a wide variety of community services, such as: ABC Headstart, Success by Six and Speech-Language Services. Time allocated for collaborative planning. Development of guidelines for identifying students who would benefit.	Implemented parent effectiveness training classes. Parents assist in the program.	School council meetings. Connecting parents to community services.
102	Mathematics	3 to 9	1:1 and small group pull-out Math programming for "at-risk" students. Include focus on test-taking skills.	Lead teacher providing PD for classroom teachers.	Satisfaction survey.	Information evening, AISI report cards, newsletter, brochure explaining the project, school council meetings.
363	Mathematics	4 to 6	Math lab where Math resources and interactive learning takes place. Developed assessment and evaluation measures and standards within grades. Host celebrations of Math learning.	In-services on philosophy and practices in the Math program. Math resources purchased.		
405	Mathematics	7 to 10	Use of "The Learning Equation" on an individual programming basis. Success Maker Math program to be used in another teacher's classroom .			Director of Poundmaker's Adolescent Treatment Center & the Counsellor Coordinator are the designated parents of all the students. They approve of implementing computerized Math programs.
448	Mathematics	4 to 12	Use of technology and increased hours of Math instruction to enhance Math achievement. On-line instruction and the integration of graphing calculators.	Lead teacher introduces new Mathematics instructional strategies and resources to teachers. Mentorship and collaboration.	Parent workshops and orientations.	Newsletters and information shared at school council meetings.

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477	Mathematics	1 to 9	Through teacher networking students are provided with planned labs and projects, integrated technology, and consistent assessment in their courses. Use of manipulatives in the Math program and other "best practices" as determined by networking teachers.	Math coordinator worked with individual teachers at the schools using a rotating substitute teacher. Provided teachers with Math resources. Networking sessions for elementary group and junior high group and Math in-services.	Satisfaction survey.	Informal discussions with Math coordinator and Math teachers.
627	Mathematics	10	Math 10 prep project to provide enrichment/ remediation class between Math 9 and 10. Pretest to determine strengths and weaknesses and build program around the student. Focus on basic Math skills without a calculator.	Locally developed handbook and test bank.		Regular personal contact, newsletter, registration night, contact with school counsellor.
644	Mathematics	1 to 9	Introduced The Learning Equation interactive CD-ROM for grade 9 Mathematics.	Ongoing professional development by administrator/grade 9 Math teacher as to how to best utilize technology.		
672	Mathematics	3 to 9	1:1 and small group pull-out assistance in Mathematics provided by 0.32 FTE Teacher and TA.	Mathematics PD through Regional Consortia.		Parental awareness through parent-teacher interviews and communication.
676	Mathematics	10 to 12	Provide Math 14, 24, 10 Prep and Math 31 programs through hiring additional staff. Materials purchase for new courses. Integrate technology into Math curriculums.			Parent awareness through teacher communication with parent and through the efforts of the parent society.

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854	Mathematics	3 to 12	Direct instruction of mathematics in small group or tutorial sessions. Problem solving instruction. Math strategy instruction such as language development strategies for Math, key word analysis, use of decision trees.	In-service and review of the teacher effectiveness program re: elements of Math instruction.		Discuss with parent council and review results with parent association.
874	Mathematics	K to 12	Purchasing Math resources, especially manipulative materials for all grade levels.	In-service opportunities to integrate the resources into the Math program.		Principal reports about the project to the board.
927	Mathematics	1 to 5	Design individualized tutorials for 1:1 and small group pull out Math instruction. Using "Math to the Max" resource. Daily Math exercises and problem-solving strategies.	Workshop for all elementary Math teachers focus on developing skills in utilizing effective instructional strategies in Mathematics. Handbook developed to help set up program in other schools. Lead teacher given 2-periods/week preparation.	Parents assist in the tutorial homework completion on a daily basis.	Ongoing communication regarding student progress.
438	Science	1 to 8	Focused attention on the scientific process. Use and maintenance of Science portfolios. Students participated in Science fair.	PD for teachers to improve their Science instructional skills. Developed Science learning kits to be accessed by any teacher and grade. Time allocated for collaborative planning.	Judges for the Science fair and classroom presenters.	Information package regarding Science projects, school council meetings.
516	Science	4 to 9	Use of Science Alberta School Quest Program - problem-based curriculum which develops and implements integrated curriculum across grades. Cross curricular teaching and open-ended problem-solving. Student active learning in the community .	Develop authentic assessment strategies for student performance in problem solving.	Volunteers for field study experiences (supervisors, drivers, mentors). Participated in community-based projects.	School website.

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712	Science	9	Globe Science Program will be integrated into the Math and Science program. Hands-on approach to learning Math and Science.	PD targeted at improving teaching strategies in cooperative learning and metacognition. Two teachers received Globe certification. Network of Curriculum & Instruction Leaders trained to facilitate the collaborative action research process.	Supervised students.	Parent night, local newspaper, newsletter and phone calls.
776	Science	K to 9	Students will regularly participate in hands-on Science experiences.	Each Science teacher will participate in at least one Science related professional development activity each year. Inventory current Science equipment and draft purchase request lists. Science kits will be developed.		
968	Science	1 to 6	Use Howard Gardner's approach in Science - finding appropriate tests texts, stories, song and poetry. Revise assessment instruments at all levels.	Provide staff with resources to modify instruction and provide remedial programming in Science. Science resource kits created with a focus on good French literature, supplies for experiments and evaluation documents. Resources distributed to all schools.		

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714	Social/ Humanities	10	Creation of a Humanities 10 course integrating of units of study in both English and Social Studies. Team-based model for student interaction and student-led conferences. Integration of multi-media course of studies and project-based approach.	Teacher collaboration, PD focused on cooperative learning and meta-cognition. A network of Curriculum & Instruction Leaders trained to facilitate the collaborative action research process.	Audience for student presentations.	School website.
413	Arts	K to 6	3 in-depth fine arts programs presented by professional Alberta artists. Students participated in creating a mural.	Teachers are incorporating skills taught by the artists in residence include writing, storytelling and visual arts.	Parent volunteers assist students during the program. Parent committee put final coatings on mural.	School council meetings.
489	Arts	1 to 6	Integrating a multiple intelligences/fine arts component involving whole school community. Provide for enhanced drama, music, dance, art and writing activities using fine arts specialists and community professionals.	Classroom teachers plan with fine arts specialists integrating multiple intelligences strategies through thematic units in the various subject areas. Team teaching and regular coordination time scheduled.		Final product, such as an art display or a performance production shared with the school community.
531	Arts	K to 6	Integration of music, song, curricular themes and general music awareness in-class through support of music specialist. Use singing to help teach French language. Use music and song to teach reading and oral language skills.	Teachers provided with informative binder including long range plans for grade level and ideas for integration and curriculum relevancy. Best to have a music specialist drive the project.	Parent survey, parents are included as decision makers and parent in-service re: Headstart program.	School council, newsletter and school website.

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573	Health	6 to 7	Student projects focus on self image, self awareness, life choices, goal setting, dealing with stress in a positive way, nutrition, exercise, careers, etc.	Staff members met once per week and developed a course to be implemented once a week. A package of resources with activity based learning themes was developed and shared with the school division.		
231	French Language	K to 8	1:1 instruction, small group support, in and out of class support by .5 FTE teacher in French literacy. French Language "Program d'Ecritue Quotidienne" for whole class use. Use of French equivalent of Assured Readiness for Learning Program.	Assessment, adaptation of diagnostic tools, timetabling and resources.	Involvement in individualized program plans.	Newsletters and sharing with school council.
281	French Language	K to 6	Early literacy in both English and the French programs from K-2. Curricular support, modeling of instructional techniques and resources review and information provided. French homework club.	French Immersion PD. In-services by French Coordinator. Teacher to coordinate French programs within school.	Parents involved in the district French Immersion Committee and in the French Homework Club at school. A group of parents are committed to revitalizing a Lethbridge CPF Chapter for the 2002-2003 school year.	Monthly meetings, newsletters, information sessions and parent workshops.
451	French Language	K to 12	Differentiation of instruction, small learning groups, resource room and language learning lab instruction. Cultural and cross graded activities to promote French language acquisition. Silent reading program with leveled books.	In-services and school wide PD.	Parent volunteers in library, practicing Math vocabulary list with children at home, PD night where differentiation strategies were presented to parents.	Newsletter, school council presentations and literacy night for parents.

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473	French Language	1 to 6	Integrating computer learning in French classes.	Consultation with U of A French language instructor. French software. Review teacher assessment of French oral comprehension.	Satisfaction survey.	Information to French websites.
490	French Language	1 to 2	1:1 and small group pull-out assistance with French language reading, fluency and comprehension. Literacy teacher assists classroom teacher to implement appropriate classroom literacy strategies.	Weekly consult with literacy teacher and homeroom teacher.	Daily reading with parents at home, teacher-parent training sessions and satisfaction survey.	
493	French Language	1 to 6	1:1 and small group pull-out assistance with French language programming.	Frequent communication between French learning assistance teacher and class teacher to ensure program consistency.	Parent consent.	Written progress report.
601	French Language	K to 6	Implementation of "Calgary Reads" in French immersion elementary schools where French tutors work twice weekly on a 1:1 basis with grade two students experiencing difficulty in learning to read.	French Immersion Consultant supports ongoing staff development networks and cohort groups. 1:1 support provided by consultant, mentorship/peer coaching element.	Input from Canadian Parents for French during proposal development.	Home/school communication in order to improve student achievement in French Immersion Programs. Presentations by FLC to groups of parents and school councils regarding different aspects of French literacy.
274	Technology/ ICT	10 to 12	Development and implementation of curriculum units and projects designed to achieve technology outcomes as listed in ICT Curriculum. Construction of a "lesson bank" of ideas.	Collaborative planning and team teaching with technology teacher to assist classroom teachers to integrate technology into their curricula areas. 1.0 FTE technology teacher.		Parent consultation in the initial stages of this project. Reports to the school council.

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Project #	Project Focus Area	Grade Levels	Instructional Strategies	Professional Development	Active Parent Involvement in Projects	Communication to Parents
275	Technology/ ICT	1 to 9	Implementation of new lessons with active support of the Instructional Technology Coordinator. Collaborative development of units, lessons, enhanced learning materials, assessment tools and projects to incorporate technology outcomes.	PD activities which support specific needs of staff. 1.0 FTE Instructional Technology Coordinator.	Parent days to showcase projects. Demonstration of slideshow and digital movie on special nights.	Technology information in newsletters and demonstration of use of technology during parent-teacher interviews.
293	Technology/ ICT	K to 6		Technology coach/mentor assists teachers in development and implementation of ICT learner outcomes in core and cross curriculum subjects, collaborates with colleagues, provides PD. Identification of hardware and resources to enhance ICT curriculum.	Visit computer labs and participate in projects.	Demonstration of learning at parent-teacher interviews.
297	Technology/ ICT	K to 6	Technology coach/mentor assists teachers in development and implementation of ICT learner outcomes and district ICT objectives.	In-servicing of staff by Technology Coach re: computer hardware and software. Collaborative development of units, lessons, enhanced learning materials, assessment tools and projects to incorporate technology outcomes.		Demonstration of learning at parent-teacher interviews Education week display.

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333	Technology/ ICT	1 to 12	Developed inquiry-based student projects that promote understanding of a wide variety of curricular concepts at all grade levels.	Active partnerships with a strong action research focus, mentorship, coaching, just-in-time learning, job embedded staff development, school based planning, networking. Team of support teachers to provide in-school workshops by lead ICT teacher.	Parent volunteers directly involved with students in classrooms and labs. Parental input on AISI steering committee.	ICT projects regularly shared with parents and school council meetings.
384	Technology/ ICT	K to 9	Pilot units developed with all students, implementing, reevaluating and researching the finished projects. Portable computer lab.	Teach 'n' Tech sessions twice a week after school for staff and Telus Learning Training.	Access laptops and network during school council meetings. Inclusion of technological projects.	Projects displayed at parent-teacher conferences. Parents were encouraged to have the students respond to questions about their projects.
418	Technology/ ICT	10 to 12	Designated a distance education room where students work on distance delivery courses under supervision. Teacher assistant available to support traditional correspondence courses. Use of ADLC synchronous online courses.	Training includes technology, classroom structure and providing support, resources and encouragement to students.	Parents toured classroom.	Yearly parent information night, demonstration of WebCT, school council meetings.
447	Technology/ ICT	K to 5	Curriculum projects created that incorporated technology, curriculum and ICT outcomes. Technology Ambassadors developed with grade 4 and 5 students to assist with peer teaching and general assistance with computers.	Team teaching, technology team training, staff technology club.	In-service opportunities in lab, parent survey.	Monthly newsletter "Tech Talk".

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462	Technology/ ICT	10 to 12	Students are brought together with teachers through the internet and audiovisual conferencing tools. Provided "help desk" where students phone for additional help. Teachers modified hours to provide tutorial homework assistance.	Team teaching approach using the ADLC specialist to support classroom teacher. Developed 11 courses available for delivery.		Parent-teacher meetings.
486	Technology/ ICT	K to 6	Develop student projects to post on the Telus Website.	Coordinator works collaboratively with teachers in grade level groups to develop teaching strategies that focus on the integrating technology in ICT curriculum. Provide continuous, collaborative and intensive PD.	Opportunity for parents to participate in classroom activities and professional development. Satisfaction survey completed.	
492	Technology/ ICT	K to 12	Teachers progressing from the former approach of focusing on skill reinforcement games and specific technology to addressing higher level thinking skills.	PD for staff to improve technology instructional strategies, staff members to improve their web browsing skills and discover the wealth of resources available on government and other educational sites, personal and small group in-service sessions.	"Unveiling celebration" of a wall to wall mural in computer lab.	Newsletter, school council meetings.
512	Technology/ ICT	1 to 6	Support systems that include increased multi-media resources and communication/support from ADLC staff. Use of CD ROM, internet, video and traditional correspondence mediums. Creation of multimedia materials.	Site facilitator. Increased interaction and communication of all partners through e-mail, telephone system and website.		Contact was made via e-mail, phone calls, written correspondence, multimedia materials and hosted parent meetings. Communication with our stakeholders is vital - forming a Virtual Parent Council.

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578	Technology/ ICT	1 to 9	Multimedia learning room housed advanced computer equipment to provide students with improved access to information. Use of "Smart Board" technology. Real time on-line instruction techniques.	"Smart Board" sessions. Staff completed online courses for PD.	Developed yearbook. Parent in-service taught use of SMART board technology.	
623	Technology/ ICT	K to 9	Purchase of computer and computer related equipment. One period a week for technology integration and computer lab access.	Workshops for teachers regarding how to use computer technology. Internet courses.	Endorsement of the project by board of directors. Parent survey.	Consistent communication with parents.
663	Technology/ ICT	6 to 12	Implementation of ICT Curriculum. Technology support.	Collaboration with Calgary Public School in the use of WebCT project.		Teacher contact with parent.
669	Technology/ ICT	7 to 9	Technology mentor/teacher to help infuse technology throughout the programs of study. Expose students to various forms of technology.	Technology staff plans ongoing PD opportunities. Technology mentor will work with staff to develop curriculum and software.	Parent council provided funding for much of the hardware as well as software.	
689	Technology/ ICT	K to 6	Individualization and flexible use of computer technology in settings both within and outside the classroom. A portable lab of 18 Macintosh Book computers available for action research.	On-site professional development. 1:1 mentoring with technical support for mobile lab.		School newsletter and school council meeting.
741	Technology/ ICT	K to 10	Improve student skills in keyboarding, word-processing, database, spreadsheets, internet use and publishing. Using computer programs to enhance other academic courses.	Provide in-service to teachers for ICT program of studies. Upgrade computer lab, computer textbooks and software.	Satisfaction survey. Parents directly involved in helping with research on the internet and with troubleshooting the equipment.	Parent board and committees.

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800	Technology/ ICT	K to 6	Infusing ICT curriculum goals into core curriculums. Redesigning the library/media centre.	.5 FTE literacy media specialist to support teachers and help implement curricular goals. Staff In-servicing re: informational literacy strategies and how to infuse technology into curriculum.	Raised funds to buy computers and appropriate furniture.	
842	Technology/ ICT	K to 9	Revision of unit plans to incorporate intentional and systematic use of library and computer research tools to enhance instruction and encourage students to apply research tools and techniques consistently.	Expanded library's research resources and hired library resource person. Networking of the computer lab so that teaching can occur in a classroom setting. In-service presentation to teachers.	Parent board has a central role in determining how funds are used. They monitor the success of this project and will continue to have a direct voice in the strategies and allocation of resources for the coming year.	
865	Technology/ ICT	K to 12	Motivate student work and attitudes by the prominent display of student work and achievement. Acquisition of modern, powerful and flexible technology. Computers moved from computer lab are placed in regular classrooms and/or teacher work areas.	Technology coordinator/teacher will run multi-session mini-courses on practical integration of technology into the core curriculum areas. PD activities include peer to peer mentoring (just-in-time), small group collaboration, and formal PD sessions.	Parent board and its committees have an important role in determining priorities.	Reported regularly to parents though our school's parent lead executive.
871	Technology/ ICT	4 to 10	Use technology in non-technical classes more frequently including web quest and research assignments.	In-service to staff to assist with providing technology instruction to students.	Optional homework and extra worksheets for at-home practice. Parents are invited to attend the final class of the term.	
916	Technology/ ICT	7 to 12	Improve student skills in keyboarding, word processing, database, spreadsheets, internet use, and publishing.	IT teacher provides support and encouragement as well as in-service on the use of technology for the other classroom teachers.		Parent board.

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953	Technology/ ICT	K to 12	Use of electronic tool Profound Learning Systems (PLS) to deliver curriculum content and to enhance and track student performance and the retention of essential learning.	Manager of Technology & Innovation (MTI) provided in-services to teachers. Creation of PD and research support position provides teachers with enhanced support for the effective implementation of PLS. Developed PLS course material.	Guide strategic planning and resource allocation. nPLS system is designed to involve parents in the home in support of student learning.	School council.
4552	Technology/ ICT	K to 9	Increased student access to the computer lab through the purchase of more computer hardware and software. Integration of ICT into program planning and student assignments.	In-service opportunities for technology integration.		Communicated to school councils. Shared information during general meeting of school society.
457	Special Education	3 to 6	Use differentiated instruction to meet the needs of all students including student profiles and portfolios. Provide classroom assistant personnel to support differentiated instruction.	Develop a school based Inclusive Education Team to provide ongoing support. Facilitate regular team meeting times. PD focused on differentiated instruction. Team planning. Purchase resources.	Satisfaction surveys.	School council meetings, newsletter.
534	Special Education	7 to 12	Staffing to support integration of special needs students in regular classes and instruction in alternative programs. Life skills projects to develop community based skills.	Coordination and monitoring of volunteer placements and skill development.		Orientation meeting and consistent communication with parents.

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304	Special Education	K to 6	Adapt curricula and teaching strategies to the needs of all students including in-class enrichment activities. Developing appropriate Individualized Program Plans (IPP's) including use of commercial program. Leveled books and daily sustained reading.	.5 FTE site-based special needs improvement facilitator to assist and support regular classroom teachers. PD on development of IPPs. 3 staff members attended a three-day "Later Literacy" workshop. Pull out model preferred over in-class assistance.	Sign IPPs and committed to a schedule of reading time at home.	
816	Special Education	8 to 12	Introduction of F.A.S.T. reading program to 7 students.	Principal enrolled in training and shared expertise with staff.	IPP meeting involvement where pre and post test results were shared.	
958	Special Education	3 to 12	Specific strategies for students with a non-verbal learning disability used in small group intervention.	Identification and assessment of student, review of material to determine most appropriate strategies. PD activities focus on Non-verbal learning disabled students.	Involvement in the IPP processes, accessing websites, readings and attending conference.	IPP meetings and sharing of information re: websites, reading and PD.
282	Special Education	5 to 6	1:6 life skills instruction for students with severe special needs. Develop, review and modify life skills curriculum for Divisions I & II. Provide curriculum in real life situations through community involvement		Parent-teacher conferences to develop goals, strategies and program outcomes. Parent survey completed.	Student achievement and results were discussed with parents on an ongoing basis.

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354	Special Education	1 to 6		Leading expert evaluated program for children with autism, provided teachers with in-depth understanding of autism and effective programs and teaching techniques to use with students with autism. Develop strategic plans and goals for continued PD.	Half of the parents of children at the school were involved in the project as members of the board. Satisfaction survey completed.	
437	Special Education	1 to 5	Small group pull-out enrichment assistance for high level students determined using Renzulli Model of Selection. Compacting curriculum in regular classroom to eliminate repetition concept teaching for student in program. School-wide writing process.	In-service re: writing process for all staff.	Parent survey.	Individual student reports after each 3 week module, brochure, displays and parent-teacher nights.
105	At-risk Students	3 to 12	Small group instruction by basic skills coordinator supported by TA using a "Basic skills Program".	PD for all teachers involved Basic Skills Program. Orientation for all classroom teachers.	Parent consent to program, involvement in Individualized Program Plan and parent survey.	Phone contact, IPP meetings, and information pamphlet distribution.
279	At-risk Students	4 to 6	Daily, intensive 1:1 instruction in reading and writing for students at risk by Later Literacy Teacher and assistant. Strategy instruction in the area of decoding, vocabulary and reading skills.		Participation in information evening, reading with child 25 minutes per night and parent survey.	Information evening prior to entrance into the program.

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280	At-risk Students	K to 2	1:1/small group remediation with teacher and TA 1.5 hour lessons per week developing early literacy skills (French and English). Modeling child-adult interactions around story-telling, responding to children and initiating expressive language.	1.0 FTE Literacy coordinator	Work with children at home. Tapes go home with the child containing phonemic activities and stories that children have read at school.	
288	At-risk Students	1 to 6	Relief time for classroom teachers to provide 1:1 or small group assistance to their students. IPP developed for students. Variety of student needs targeted such as learning strategies, misunderstood and missed assignments and low test results.		Involved in early consultation process re: involvement in the program, IPP development and evaluation at end of service.	IPP meetings, phone calls and regular contact.
290	At-risk Students	1 to 2	Support teacher provides small group and individualized instruction for at-risk students. Assessment, IPP development and program planning for students in consultation with classroom teacher.	Support teacher attended PD. Supervise Speech-Language Pathologist.	IPP meetings, participation in and out of school workshops.	Ongoing communication.
315	At-risk Students	1 to 9	Short-term, small group remedial program developing sound literacy skills. Phonographix Reading Program and "Visualizing and Verbalizing Program for Reading Comprehension". Pro-social skills.	1 FTE teacher organizes material resources, develops purchase plan and coordinates lab. Special education and literacy workshops. Collaboration and planning time. In-service in regard to integration of literacy instruction to other subject areas.	Regular IPP case conference meetings, parent surveys.	Phone calls, progress reports, and newsletters.

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430	At-risk Students	K to 9	Setting personal class and school goals and objectives. Direct and consistent contact between the school and home for all at-risk students. Tutorials for at-risk students.	.5 FTE support staff per division that reinforces and assists students and families. Need to coordinate parent expertise in next school year.	Class goal setting, reviewing and signing off homework.	
480	At-risk Students	10	Provide an academic support room and necessary materials, supplies and staff for at-risk students. Organize and implement a student mentorship program. Incorporate Learning Strategies into the basic core subjects.	Trained a full time coordinator to oversee the project	Satisfaction survey and parent commitment.	Parent-teacher interviews.
675	At-risk Students	10	Low pupil-teacher ratio of 15:1 for core programming. One to one tutoring, accommodations, multi modality instructional and self paced learning. Same teacher for core classes.	Transition with junior high to identify students in need, project evaluation and assessment.	Meetings with administration. Parent consent.	Phone calls to update parents on student progress.
701	At-risk Students	7 to 10	Extra staffing provides small group intervention for at-risk students through tutorials, pull-out programs, lunch time support, and after school support.	Collaboration of intervention teachers with core teaching staff. Sharing strategies and resources with other staff regarding strategies to develop literacy, numeracy and organizational skills for at-risk students. Time allocated for collaboration.	Provide feedback re: success of transition of their child from school to school.	Parent-teacher interviews and phone calls.

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783	At-risk Students	10	Homogeneous groupings and smaller class sizes for Science, Math and English. Week of summer camp where students become familiar with school, peers and teachers. Use of "Building Resiliency in Students"(e.g. self advocacy and counselling).	.7 FTE teacher responsible for timetabling, organizing transition and assessing student progress.	Attend an orientation meeting.	Phone calls on regular basis, contacted via letters, attend private conferences with our AISI teachers, given progress reports and are invited to parent-teacher interviews.
797	At-risk Students	10	Team including literacy assistant and behavior strategist offer ongoing support to students with diverse learning and behavior needs. Monitor students. Program entitled "Personal Best for Youth". Mentors for students through Alberta Mentor Foundation for Youth.	Team screens students in Grade 9 for Grade 10 program placement, monitor performance measures and offers PD to staff.	Screen students in Grade 9 for Grade 10 program placement, monitor performance measures.	AISI teachers maintain frequent contact with parents of students.
807	At-risk Students	2 to 4	A para-professional was employed to work with students experiencing specific academic deficiencies. 1:1 and small group assistance for students not coded but needing academic assistance.	Consultation with classroom teachers.		Personal contacts with parents.
521	Counselling	7 to 12	Team approach and alternative teaching strategies to support high-risk students. Access to adequate counseling, guidance, timely intervention and follow-up. Modified programs developed including study skills component.	PD activities that build capacity to successfully accommodate the integration of students with special learning needs, including conflict resolution and differentiating curriculum, team collaboration and mentorship program.		School council meetings and regular contact with parents of all targeted students.

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422	Counselling	1 to 12	1:1 and small group personal and crisis counseling from trained counsellor. Student personal development programs offered in classrooms.	Partnership and joint management with Family Services to provide human resources and interagency communication.	Satisfaction survey.	School council meetings and letter sent home to all parents.
612	Counselling	K to 9	Personal counseling for students by .5 FTE counseling teaching staff. Family school liaison worker to work with staff, students and families.		Literature requests.	Newsletters, personal parent interaction.
781	Counselling	1 to 9	Multi-interest set of "community outreach" projects where students interact with the community.	Coordination and monitoring of community placements and skill development.	Chaperones to community placements, contact agencies, suggestions for changes and improvements.	Consistent communication with parents.
329	Counselling	10 to 12	1:1 career consultations with Grade 10's. CALM class presentations regarding the new Career Directions Modules. Monthly newsletter for distribution to students. Develop "Panther Plan for Success" with each student to set goals.	1.0 FTE to provide leadership and guidance to staff and students. Build user-friendly career resource centre. Liaise with school counsellors regarding in-servicing staff with tips on how to build career development principles into daily lesson planning.		Letters, newsletters of the program's objectives, access to career resources and booklets. Parent-teacher interviews and phone calls.
260	Transitions	7 to 12	Students with severe special needs participate within community environments to develop life long skills. Support from teacher and two teacher assistants to facilitate development of needed skills to be successful in the community.	Coordination and monitoring of volunteer placements, recreational activities, transportation, satisfaction surveys and skill development.	Participation in home shopping program.	Consistent communication with parents.

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335	Transitions	8 to 12	Liaison worker to spend time with students to establish links between student, families and schools. Read to Succeed implemented.	Intensive liaison with Native Education Coordinator, counsellor and parents. Intensive, extensive staff development program.	Provided books for home reading.	Personal contacts made by liaison worker.
359	Transitions	10 to 12	1 teacher for core subjects and Learning Strategies course to identified students. Students in an "outreach setting" youth workers involved with students. Grade 10 students begin career portfolio. Integration of language delayed students with SLP support.	Connect "Success Mentors" with teaching staff to assist in connecting student needs, that effective teaching strategies are enhanced and extended.	Parent survey. Parents are also involved in the job-shadowing day and some are volunteer supervisors on the post-secondary visits.	Parent-teacher nights, frequent ongoing contact, school council meetings and phone calls.
467	Transitions	7 to 12	Self-contained classrooms with smaller pupil-teacher ratio where students work on core subjects under the close supervision of a number of teachers and teacher aides. IPPs are developed. Consistency of methods and expectations over subject areas.	Further development of the life-skills program. Acquisition of modified programs.	Assist in IPP development.	Open House, IPP monthly updates and quarterly print-outs.
248	Transitions	7 to 9	Outreach program with modified school day, smaller group instruction and primary focus on core subjects. Core programs with differentiated instruction combined with personal management courses in form of IPP. Core of adults who work daily with students.	Outreach Educators Network conference and visited other outreach programs. This program is not appropriate for students with severe behavior disorders.	Intake process.	Staff attempt continuous ongoing communication.

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716	Transitions	9 to 11	TA follows students to regular class, provides academic support and small group tutorials. Transition classroom for at-risk students with flexible time schedule and modified programs. Practice effective behavior management strategies. Program counselling.	1 FTE teacher available in transition room. PD targeted at improving knowledge of student motivation and at-risk students.	Parents provided classroom assistance during Home Economics, completed parent survey.	Phone calls immediately made if student not in attendance.
605	Assessment	K to 12	Using the rubrics for students self-assessment of progress. Students assess own progress in relation to the 5 learning outcomes and set goals for improvement. Development of assessment tool.	Provide staff support and in-servicing in the implementation of the assessment tool. Teachers use assessment information to plan instructional intervention in the 5 quality learning outcomes. Teacher networking.		Use of the assessment tool in student-led and parent-teacher conferences.
629	Assessment	1 to 12	Small classes for four, 3 grade groupings. Entire review of curriculum to align with Alberta Learning Program of Studies.			Parental discussion at two meetings.
126	Learning Variables	10 to 12	Encourage independent learning and collaborative learning with structured contact with teacher in 1:1 tutorials, symposia and peer settings. Integrate technology into curriculum. Develop integration strategies between subjects.	Staff hired to provide teacher release time to work with project student groups or individuals. Teacher directed professional development time. Regular continuous collaboration.	Parent survey.	Parents invited to student presentations.

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270	Learning Variables	1 to 7	Combine French Immersion and regular stream classes for swimming instruction and literacy activities. Community facilities to provide Red Cross swimming program and physiotherapy for students with special needs. Focus on literacy by using the public library.		Parent survey.	Incidental contact and school website.
464	Learning Variables	9 to 12	Resource centre used to access tutoring and intensive mentoring in basic skill areas. Access to technology including ADLC, Student Skills Portfolio and online access. 1:1/small group counseling (educational, career and personal/social needs).	Construction of a student resource centre. Staff available at the resource centre which has flexible hours. Technological training for "integration of technology through outcomes curriculum".	Ongoing support of monitoring at home, attendance and home schedules.	
808	Learning Variables	K to 8	Central resource centre for all students in our day school program. Resource centre technician to purchase materials and oversee resource loan program.	Teachers, home school coordinator and administrator meet to plan and purchase student resources for the curriculum resource center. PD in the area of resource-based teaching and learning.	Resource and professional people to support teachers. Parents involved in the maintenance of the resource center and in helping teachers in doing classroom work and library research.	Parent board.
232	Class Size	2 to 5	Reduced class size ($\leq$17). Students will remain together for Language Arts course from Grades 1 to 3. Intensive language program emphasizing reading and writing, skills stressing literacy.	PD to focus on small group instruction, peer support/study group.		Parents consulted and reviewed results with staff.

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251	Class Size	1	Reduced class sizes to below 20. Balanced literacy strategies such as word wall, embedding vocabulary. In familiar text, letter sound instruction.	Teacher journals document instructional strategies, changes and observations of student learning. In-servicing for teachers re: new teaching strategies.	Volunteer in classes, reading with children at home.	Information sharing evening, newsletters, sharing of results at school council meetings.
296	Class Size	1 to 2	Reduced class size. Identify and develop shared strategies and critical elements for teaching language and Math and integrating technology in smaller class settings.	Ongoing PD and support of teachers in reduced class size setting. Working with U of L professor, identified Math literacy as goal and concentrated on teaching vocabulary necessary for students to think through problems.	Provide workshops to parents on working with their children and incentives to parents for their involvement in their children's learning, parent sharing nights. Parent in-service focused on how to incorporate basic literacy skills into family time.	
296	Class Size	1 to 2	Reduced class size. Balanced literacy strategies. Integration of technology into classes and Math problem solving.	Half-day bi-monthly meetings. Purchased resources.	Parent sharing night where parents learn basic skills and how to embed these skills into home routines. Participation in learning games in-service.	Parent-teacher interviews and ongoing consultation.
327	Class Configuration	1 to 6	Grade groupings for Language Arts and Math rather than combined classes.	Two 0.5 FTE teachers to help separate combined classes for instruction in Language Arts and Mathematics.	Workshop on effective parent communication facilitated through the ATA, Guided Reading Program volunteers, home reading program and parent survey.	School council meetings, student planners, newsletters, email and telephone.
617	Class Size	6 to 8	Reduction of class size by employing further staff. Scheduling of teachers, so that they teach same students core subjects.		Involvement in development of Individualized Program Plans and school visits.	Parent-teacher interviews.

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483	Class Configuration	K to 2	Combine Kindergarten, Grades 1 and 2 into a single class. Instruction focused on developing learning strategies, independent thinking skills and problem solving skills. Groups change with instructional goals (e.g., cross grade, learning styles, projects).	Team teaching approach with certificated and non-certificated staff. PD in numeracy and literacy areas. Purchase of materials for multi-grade class.	Parent workshops, parent volunteers, parent survey.	School council meetings.
367	Teaching Practices	K	In-depth focus on the Kindergarten Program Statement including key areas of numeracy, literacy and technology. Development of assessment tools, documents and kits.	Standard reference binder provided for each teacher to use as working document. Series of PD sessions focus on literacy, networking with ECS teachers, technology in-services to preview software and discuss ICT outcomes in Kindergarten.	Parent volunteers assist in classroom, parent survey, home support such as book bags.	
571	Teaching Practices	1 to 9	Students complete a variety of comprehension and problem solving activities at appropriate grade level corresponding to their current units in each subject area. Multi-aging interaction. Program to recognize student achievement and improvement.	A package of resources with activity-based learning themes was developed and shared with the school division.	Volunteers assist with the implementation of activities each week. Parents try the activities during times of celebration. Satisfaction survey.	School council meetings.
690	Teaching Practices	2 to 12	Master teachers model and demonstrate lessons to targeted teachers, students and parent groups over 6 to 8 weeks. Provide teachers with resources and alternative strategies.	Coaching, mentoring, team teaching, team planning, small group work, staff development opportunities, networking opportunities, and consultations. Interactive team involvement in class between mentor and host		Parents have been informed of the project's intent and the outcomes of the coaching and mentoring.

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				students and teachers.		
717	Teaching Practices	K to 3	Cross-curriculum thematic project approach to instruction emphasizing higher levels of thinking. Embedding thinking skills into class on a daily basis. Small/large groupings working on active "hands-on" and real-life learning experiences.	Reflective teaching practices to develop divergent thinking in students, resource materials on metacognition, professional reading, time allocated for collaborative planning, team teaching and peer observation. Need for shared vision.	Parents assist and observe in classroom.	Newsletter, daily SOS messages, parent education night focused on thinking skills and strategies, reading materials on thinking skills available and student guided interviews.
3332	Teaching Practices	1 to 3	Research current brain research practices and develop practical methods of implementing these in the classroom. Practical ideas from brain gym, sensory integration and enhancing imagery incorporated in programming. Videotape students learnings.	Early Education conference attended by all school staff. Professional reading. Made booklet of well-developed lesson plans for others to borrow.	Parents can do the activities at home.	Presented video tape of students, handouts, monthly newsletter about school research, school council meetings and local media.
401	Miscellaneous	K to 9	Monitor student attendance. School Attendance Officer to follow-up. Enrichment programs made available to student who is gifted and talented (keep portfolio of enrichment activities.) Study skills taught including use of Brain Booster Workshop.	Scheduled PD frequently for short spans of time, teacher presentations, activities focused on who are gifted and talented students.	Parents in-services in study skills, pro-active in attendance issues and assist students in preparing portfolios.	

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469	Miscellaneous	K to 3	Students use eight constructs in Gardner's Multi-Intelligence Theory integrated into student-led activities. Developed problem-based learning centres. Recognition of student's individual talents, school-wide fairs.	.5 FTE teacher to organize ACHIEVE program. Time allocated for collaborative planning, team teaching and peer coaching.	Satisfaction survey.	Yearly report to school council.
729	Miscellaneous	3 to 12	Instruction in critical thinking skills so students can assess the validity of information portrayed by the media. Assessment and resource base for determining the truth or information portrayed by the media.	Team teaching and team planning sessions.	Participation in internet safety sessions.	Internet safety sessions.
898	Miscellaneous	K to 9	Implement the use of the resources in their program and lesson plans to enhance student learning. Assessment and resource base for determining the truth or information portrayed by the media.	Enhancement of school library resources, resources for teaching and learning Math through manipulatives, Kindergarten learning centres, Science materials for hands-on learning activities and resources for Language Arts listening and communication.	Parent surveys and questionnaires.	

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